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Some Practical Points in the Treatment of Obesity

EDWARD E. CORNWALL, M.D., F.A.C.P.
Brooklyn, New York

The two general causes of obesity, ingestion of an excessive amount of fuel food and endocrine insufficiency, determine its two general forms, alimentary and endocrine. Endocrine insufficiency, absolute or relative, enters more or less into all forms of obesity, but it is the regular and definite cause of certain varieties, as myxedema, dystrophia adiposogenitalis and adiposa dolorosa. In simple or alimentary obesity, the basal metabolism has been found to be normal; and in this, the common form, and the one usually referred to when the term is used without qualification (and the one whose treatment is discussed here), the fault seems to be an inability to burn up excess fuel food—a failure of reserve combustion power. The organs and apparatuses of the average healthy individual, in their single and coordinated activities, have regularly a considerable amount of surplus or reserve power—they can do more on occasion than is ordinarily required of them. In the exceptional individual this reserve power may be above that of the average individual or below it; and if it is much above it, in the matter of burning up excess fuel food, we see one who does not get fat even though he ingests fuel food in large excess; and if it is much below it we see a case of obesity, unless the diet is guarded—the obese one is "unable to alter the rate of combustion to correspond with the intake of food." This functional failure, which is the essential fault in obesity, is of various grades, according to the extent to which the power of speeding up combustion in the presence of excess food is deficient. In severe cases even a very small amount of fuel food in excess of the body needs is stored as body fat.

When the condition of obesity has become established, and excess fat is deposited in the body, the treatment

is directed to removing the excess fat; which can be done, omitting considerations of surgery, by speeding up metabolism and by reducing the intake of fuel food below the body requirements, so that the body, to secure necessary heat and energy, must consume its stored fat.

Treatment directed to speeding up metabolism, except by general hygienic measures, need not be considered here; in the treatment of alimentary obesity such therapeutic procedures as the administration of thyroid extract are out of place. Remains as the essential treatment of this condition, dietetic restriction for the purpose of compelling the body to consume its surplus fat. In this dietetic treatment we have to consider a number of things, and among them the following:

1. When is the best time of the year to give reducing treatment?

There seems to be an advantage in giving such treatment, which is dietetic, in the cold months of the year rather than in the warm months. This appears from the fact that in warm weather the caloric requirements of the body are considerably less than in cold weather; and a diet arranged to produce a given reduction in weight may have a fuel value greater by several hundred calories daily in the winter than in the summer. This means that the restriction of fuel food required in the cold months interferes less with the balancing of the diet than that required in the warm months: the extra calories allowed in winter permit greater variety in the diet, and make easier the supplying of proper rations of protein, vitamines and salts, besides favoring the comfort of the patient.

That less fuel food is required in the warm months than in the cold months appears from the following

observations (reported in detail elsewhere *), which the author made on a man of fifty who measured his daily intake of food for three hundred and sixty-five consecutive days, and computed its daily protein content and caloric value. The daily ration eaten by this patient during the twenty-six days from August 5, 1912 to August 31, 1912, had an average fuel value of 2079 calories. The corresponding figure for the thirty-one days of the month of January, 1913, was 2404. The diet of this patient, which was prescribed for intestinal putrefaction toxemia, was limited as to the articles of food, but the patient was allowed a certain amount of leeway as to the quantities; and he could follow his instincts in varying his fuel ration. And as the diet was not one that would tempt to overeating, being somewhat monotonous in character, the variations in the amounts eaten may be taken as reflecting with approximate accuracy the caloric needs of the patient.

2. A question of fundamental importance in the treatment of obesity is, how rapid should be the rate of reduction?

There seem to be no rigid and specific rules to guide in this matter, but there is one general caution which should always be kept in mind, viz., to reduce slowly. It is the author's opinion that the rate of reduction should not exceed the average of two pounds per week for any considerable period, and that in many cases a less rapid rate of reduction is preferable. But it is also his opinion that in cases of very great overweight the rate of reduction may be more rapid, at least in the early period of treatment; but after the first few weeks the rate should be kept at or below the two pounds per week average. It may be mentioned here, as a matter of observation, that a diet arranged to produce a reduction of two pounds per week may produce a greater loss of weight in the beginning of treatment than at a later period.

It is good treatment to interrupt the periods of reduction with periods of rest; after a reduction of twenty-five pounds, which should take three months, a rest period should generally be given. In cases of very great overweight, however, the reduction may be continued longer, as well as conducted more rapidly, than in cases of only moderate degrees of overweight.

In this connection may be emphasized the importance of restraining the zeal of patients who desire to reduce too rapidly.

In most cases it is sufficient if the desired reduction is accomplished in a year.

3. It is not usually necessary or advisable to push the reduction in weight to the ideal limit; it is generally better to stop short of that limit by not less than fifteen or twenty pounds.

4. The caloric value of the diet must be precisely regulated in order to secure the best results. The basic fact on which the reduction in caloric value of the diet depends for its effectiveness in reducing the accumulations of fat in the body, is this: The combustion of one ounce of body fat supplies 270 calories; so that a diet which supplies a fuel ration less than the requirement of the body, invites, by every 270 calories of its fuel deficit, the combustion of one ounce of body fat. A diet which supplies daily fuel food of a caloric value less by 1,000 calories than the daily fuel requirement of the individual for his age, size, occupation and climatic environment, would invite the combustion of about four ounces of body fat; which would mean a loss of nearly two pounds weekly, other conditions remaining constant.

It is usually advisable to begin with a diet supplying about 1,200 calories daily; sometimes it may be advisable

to begin with one supplying only 1,000 calories daily; exceptionally an even smaller fuel ration may be given; and there are mild cases which do not require the severe restrictions above mentioned. As a general rule, it is not advisable to continue for a very long period with a diet supplying less than 1,400 calories; but to this rule there may be exceptions, and often in the later period of treatment more than 1,400 calories may be given.

5. In the arrangement of the diet the fuel restriction should fall on the fat and carbohydrate, and chiefly on the fat. The carbohydrate should be sufficient in quantity to protect against acidosis from the imperfect combustion of body fat.

The smaller the fuel ration, the larger, generally speaking, should be the protein ration, in order to insure against loss of body protein; but the protein ration should not be excessively large, as in some obesity diets of historic interest. The protein ration should not usually fall below 80 grams daily, nor exceed 100 grams; but in exceptional cases it may exceed the last figure; and it seems possible for some cases to do well on less than 80 grams of protein daily. In young and healthy subjects animal flesh may be allowed to supply a considerable portion of the protein ration, but in the elderly, in those with the gouty diathesis, and in some cases with heart disease, the animal protein should be secured largely if not altogether from milk and cheese, and particularly from skinned milk and cottage cheese. Eggs may find a limited place in the dietary. It is generally desirable to include animal flesh in the dietary because of its satiety value. A large protein ration is important not only because it protects the body protein against loss, but also because it has a specific dynamic effect on metabolism.

Particularly important is it to supply liberal quantities of vitamines, which can be done by including in the diet abundant green vegetables and fresh fruits; and these articles also supply salts and roughage, as well as make for variety. The alkaline salts of the vegetables and fruits act to safeguard against acidosis.

6. There are problems which arise in connection with the water ration in obesity. If a patient refuses to lose weight on a diet supplying 1,200 calories daily, some other condition than alimentary obesity may be suspected. Often it seems to be retention of water. The spaces left by the combustion of stored fat might be conceived to fill with water; and the presence of fat deposits might be conceived to interfere with the free flow of water in the tissues and its escape from the body. While in many cases no specific restriction of water is required, it is generally advisable to keep the water ration within moderate limits; and in cases of great overweight definite and considerable restriction of fluid may be desirable.

The author has made the observation on obese patients during menstruation, that reduction in weight did not always correspond to caloric intake; and the query has arisen, whether this was due to increased water ingestion and retention or to endocrine disturbance.

7. Constipation, which is invited by the restricted diet, may to a considerable extent be prevented or relieved by a liberal allowance of green vegetables and fresh fruits. If artificial laxatives are required, the mechanical laxatives, as mineral oil and agar agar, are generally to be preferred to the irritant cathartics.

8. Obesity has a definite relationship to heart failure. The action of the heart is impeded by intramuscular and subpericardial deposits of fat. Pressure of masses of fat on the arterioles and capillaries mechanically interferes with the circulation; and the obstruction

*E. E. Cornwall, Clinical Study of a Case of Chronic Intestinal Toxemia of Severe Type (*Medical Record*, Jan. 24, 1924).

in the circulation thus produced necessitates an elevation of the blood pressure, which puts a burden on the heart. Fat deposits in the abdomen, by interfering with the free action of the diaphragm, impede the heart's action as well as the respiration. And the necessity of carrying the overweight body puts a burden on the heart.

When the heart shows signs of failing in obesity, great improvement often follows reduction in the body weight, and arterial hypertension in obesity is usually greatly relieved by reduction treatment.

9. After reduction in weight it may be well to support with an abdominal belt the abdominal viscera, which, deprived of the support of the intra-abdominal fat and firm abdominal wall, tend to sag; and special exercises to improve the tone of the muscles of the abdominal wall may have a place in the treatment.

10. The use of physical exercise to reduce obesity has been extensively advocated, but the practical value of treatment along this line is probably not as great as might seem from a superficial consideration of the subject. Many obese patients risk cardiac overstrain by strenuous exercise. Exercise, moreover, increases the demand for food. The author is accustomed to lay down as a general rule for obese patients, that they continue the ordinary activities of their life. In extreme cases it may be good treatment to restrict physical activity until a certain amount of reduction has been secured; and this is particularly advisable in cases showing signs of heart failure; in such cases it may even be necessary to put the patient to bed for a while.

11. Not every case of obesity calls for reduction. Contra-indications may exist or modifying conditions. Hippocrates says that the very young do not stand fasting well, and in general it may be said that reducing treatment is better borne in the middle period of life than near the extremes. In the case of the very young, growth and development have to be considered; and moreover, alimentary obesity is not very common in the young, and when it exists, can usually be corrected by changing from a wrong to a right diet, without much underfeeding. In the case of the old, habitus has to be considered: those who have been obese for a long time have become more or less habituated to the obese state, and they should be reduced with particular care; although Hippocrates says that old persons endure fasting most easily. And those who have acute or serious chronic diseases should not, as a rule, be reduced; but in some diseases, as heart disease and diabetes, reducing treatment is usually beneficial. In any case when untoward symptoms appear, reducing treatment should be discontinued.

12. After reduction has been accomplished in obesity, how can the condition be prevented from returning? The best way is to avoid over-eating. It may happen that some improvement takes place in the power to speed up combustion in the presence of excess fuel food; but in the serious cases restriction of the diet to very near the needs of the body continues to be necessary. The satisfactory diet which maintains the weight at the desired point must be kept up. Especially to be avoided is an excessive ration of carbohydrates, and sugar, particularly, should be greatly restricted. Bread and potatoes should not be eaten at the same meal, and desserts should be largely excluded from the diet. The patient should weigh himself at regular intervals, and if signs of returning obesity appear, he should correct it immediately by a proper diet.

13. The obese patient should not attempt to reduce to any considerable extent except under competent medical direction.

Epilepsy as a Social Problem

Although there are probably few diseases which have been recognised for a longer time and about which more has been written than epilepsy, it has to be admitted that as a social problem it has hitherto received comparatively little, and certainly quite inadequate, consideration. For this reason the two articles which we publish in the present number, the one (p. 568) on the results of a census made in Surrey and the other (p. 545) on the subsequent history of a number of children who have passed through a residential school, are worthy of careful attention. To those who are unaware how scanty are our statistics of disease which does not concern the sanitary or the burying authorities it may come as a surprise to learn that there are no reliable figures as to the incidence of epilepsy. Moreover, in view of the wide differences in the infrequency of attacks, the great variations in type and severity which undoubtedly result in many cases being unrecognised, and the fact that epileptic attacks not uncommonly occur as a complication or symptom of some even graver and more urgent condition, it may safely be said that it would be impossible to obtain any complete and reliable statistics regarding the incidence of the disease. The Permanent Committee on Epileptics did not attempt the impossible. They limited their census to a definite area—namely, the county of Surrey—and to such persons as were chargeable to public authorities. They found that in the area examined the proportion of such epileptics amounted to 0.65 per 1000 of the general population, and, if this may be accepted as a fair sample of the country as a whole, they estimate that in England and Wales there are 25,000 persons affected by this disease who are a public charge. Of this number rather more than one-third—again judging from Surrey experience—are mentally normal, whilst the remainder are either insane or mentally defective. It is clear therefore, that from the point of view of incidence alone the problem of the rate-supported epileptic is a serious one. It becomes the more so in view of the facts ascertained by the Committee that one-quarter of the total number of educable epileptic children are attending no school or institution, and that of those who come within the scope of, and should be dealt with under, the Mental Deficiency Acts, less than one-fifth are in fact so dealt with.

No doubt when epilepsy is complicated by, or has inducer, serious mental defect or deterioration there is little likelihood of the sufferer being rendered economically useful; but there are many young mentally normal epileptics who drift into chronic unemployability for want of proper education and training, and there is every reason to believe that the absence of such care is also an important factor in bringing about mental deterioration in a number of cases. Dr. J. Taylor Fox, medical superintendent of the Lingfield Epileptic Colony, in his account of the after-history of 332 children who passed through the colony in a period of eight years, shows the benefits which may result from training in a suitable residential school. Although the children admitted to Lingfield are a worse than average group, inasmuch as they suffer from attacks which are too severe to allow of them attending ordinary schools, their subsequent history shows that 28 per cent. of the total have become partly or entirely self-supporting. When the unpromising nature of the raw material is borne in mind this result must be considered as very satisfactory and as demonstrating the value of the treatment and training received. Unfortunately, the accommodation at present existing for cases of this kind is so inadequate that these advantages are only available for a relatively small number. Dr. Fox estimates that the proportion of "educable" epileptic children who are accommodated in residential special schools is only about one-fifth of the total in existence, the remainder either drift into poor-law or other institutions or they are allowed to remain at home. In any event it may safely be said that the great majority of them receive little if anything in the nature of skilled treatment and training. In addition to this, as we have already mentioned, the accommodation available for those in whom the epilepsy is accompanied by mental defect is equally unsatisfactory. A careful study of the facts presented points conclusively to the serious nature of the problem, and to the utter inadequacy of the existing accommodation for the epileptic, whether mentally normal or abnormal. It may be that some of these matters will be dealt with by the Board of Education Committee on Mental Deficiency now sitting, whose report, we understand, will be published before the end of the year. It may also be that some attention will be given to the problem in the alterations to the poor-law system which are imminent. In any case, however, it cannot be doubted that epilepsy constitutes an important social problem, and that the time has arrived when it should receive serious consideration from this aspect.

—*The Lancet*, Sept. 15, 1928.

Mind, Emotion and Body Reciprocities

Why and How is the Mind so Potent for Weal or for Woe in Convalescence?

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Philadelphia, Pa.

Mind and body disturbances as shown in the mental domain are by far the most important items in convalescence. We have here perturbations in the deepmost self or psyche, the spirit which quickeneth man and distinguisheth him from the simpler forms of life. Even in the lowliest cells there is its analogue or prototype differing in not only degree but in kind.

We can quite understand the phenomena of life as responses to stimuli. It becomes a far more complicated process as we rise in the scale of being, but the same things are involved which we can also comprehend by knowing the starting place of psycho-instinctive impulsions.

The human structures, elaborate as they are, consist of mere tools through which the inner power acts, or projects itself. The main difficulty is agreement as to a name for this essential human power. The word spirit is made to do duty but, while it is used in describing what is called religion or forms of belief, as each one or each group pictures these mysteries to themselves, it comes to the same thing.

This force, or manifestation of force, is what we have to reckon with in forming our ideas of the urges which move us to do, or not do, and how to do and how much to do, or how much to leave undone. In short, the phenomena of health.

When they no longer act as they are designed; when urges are met by counter-urges, when deviations occur producing confusions, there is mental ill health. The task is then to go back as nearly as possible, to the beginning, where they started, and reapply the urges as they should work and reharmonize them. This is the process of convalescence of the spirit-body combination.

The task becomes relatively simple so soon as we come to an agreement as to what we—the sufferer and the adviser—propose to do. By placing the disturbed things, and one's idea of the things, or processes, under favorable conditions they will, in the majority of cases, fall naturally into their appointed lines. Then, if difficulties still remain, we must go back a little further and start again. As to how far, how completely, urges of the spirit can and do influence the cell—the tissue or the structure—is only as far as *accords with natural law*; no more, no less.

We can get along better by looking over the ground together and learning what resources are at our command which should be obeyed. Every cell is a mechanical contrivance to subserve or accomplish some vital function. This vital function has to do with the expression, or fulfillment of innate urges or instincts residing somewhere within, and controlling all the activities of that cell. These cells differ. What moves one to respond will not move some other. E.g., some cells react to light, some to hearing, some to touch and the like, but cells of one kind will not respond to stimuli suited to other kinds.

The activity of any living organism, or group of similar cells, is of two sorts: (a) on the one hand its activity is initiated by, and seeks to realize or express its innate urges. (b) On the other hand its activity is a response to external forces (stimuli) by which it correlates (or orients) its inner life with its environment.

In neither case is there any equivalent of physical cause and effect. So far as we can see, the *living initiative* though it must work in complete harmony with the laws of forces and constituents—molecular physics and atomic chemistry—yet it apparently stands *outside* of the structural components and systems, bending the course of nature to its will in the same way as an aviator controls his flying machine.

Two pertinent points the author Neauder P. Cook—"Instinct in the Cell" (quoted) makes are: (a) cellular or tissue growth steadily progresses (if unhindered), whereas: (b) mind, instinct, spirit, or soul growth is often through leaps and bounds or explosions of energy.

"A machine cannot arise from the action of natural force alone. It can only be conceived, built or constructed by some mind or instinct. No machine functions without an operator. No cell functions without the living instinct or drive.

"A machine is built to serve the purpose of its inventor, so every cell structure is developed to serve some self expression of its instinct. . . .

"Every machine-like function in the last analysis is itself a psycho-physical function. All its activity is 'psychically controlled' activity. Whether a stone is lifted by human muscles or by an electric crane, in either case it is the result of psycho-genic control or manipulation of physical forces.

"A machine separated from its operator is merely a corpse, a derelict vessel, drifting to destruction in the clash of natural forces. A machine comes to grief, receives injury and decays in precisely the same manner as these things happen to the living organism.

"A machine may have intervals of rest and activity, precisely as the living organism is capable of these alternations. It is needless to carry these analogies any further.

"The whole course of evolution is meaningless except as the history of the struggle of the soul that lies unconscious in the primal cell, to know itself and feel itself. Every living creature, therefore, is a temple-stair-step of the Immortal Urge to know, to feel, to thrill, to stand in awe of itself.

"To bare the head, to take the sandals off one's feet on holy ground, the maiden-blush, the marriage-veil, modesty, the anthem and prayer for purity of heart, these are the true flowers of the human soul."

The mind is supposed by many to be so mighty as a healing force that there are also many who prefer to believe it all sufficient. It would be of almost limitless efficacy if only the mind (as effector) could get in its fine work before evil conditions were produced too gravely impairing repair energies (as de-tractors).

The brain engine is the chief fountain of life energies. It requires freedom to function through unhindered pathways. If then the ways are cleared from impulse to response; and could the power be transmitted through to the outlying cells and back again, we might behold a display of its puissance that would fill us with wonder.

The mind is coming to be regarded not so much the knower as the transformer of the power to know

and understand life energies through the brain or life engine. Mind power is distributed by means of fleshly tools or instrumentalities, subject to natural laws. The self is thus enabled—through the mind—to acquire knowledge by coming into contact with the manifested universe, the cosmic urges and balancings. Thus man originates and forms his own urges, restraints, purposes and plans. Then the mind puts them into shape and drives them home as things done; achievements won. Man does not know things of themselves but only by their effects, reactions and responses, and as produced upon his psyche or inner consciousness. Mind and body in unison thus serve as effectors.

Critical situations arise all along life's journey. If, at such times lucid judgments could then be formed and right decisions executed, as the ways were about to part, then could disease be prevented; and when present could be rectified. It would be simply doing the right thing in the right way and at "the nick of time."

The feelings act compellingly upon conduct and behavior. They tend to overcome and push reason off its base; to throw the self (psyche) out of balance and thus leave one exposed to hurtful counter influences. They act in closest cooperation with the glands of internal secretion. Both these act through the same set of nerves—the self adaptors (automatics)—and through the instriped muscles of the viscera. The effects they induce upon these eminently industrious, but involuntary mechanisms, are not only upon the primary and the secondary functions—such as digestion, appropriation and elimination—but also upon certain functions so recently coming to be revealed: the acid-alkali balance in the physiology of the blood, and the physiology of the atom.

Pawlown demonstrated that the mere idea (imago) or pictured memory of food may become the activator of saliva and even of gastric juice. And equally the other way around: the destructive emotions of fear, anger, sorrow, remorse, may retard or check them.

All strong over-mastering emotions are attended by more or less undefined changes in the circulation which in turn cannot avoid exerting influence upon tissues reached by the altered blood supply. Exhaustion states, resulting from extremes of destructive emotion, and carried to the breaking point, are probably more hurtful in the aggregate, than from any other source—even the infections. They damage the delicate endocrines and reduce, or degrade, life energies beyond computation.

Especially susceptible to early and adverse influences are those exposed to torrents of "cellular insults" heaped upon their receiving stations and from diverse directions and with few intermissions. To be sure a certain degree of immunity becomes acquired through repeated mild stimulations of our defense mechanisms but not in all directions nor particulars.

In city folk, subjected to the myriad complexities of crowded centers, the wonder is that any one can and does become enured to such incessant perturbations, as some do. Such ones must be well endowed with prompt and adequate safety devices. The majority are always on the ragged edge of overthrow.

The subject is so closely allied to religion as a form or way of life, that no clinician can afford to omit learning and using so much of reverent philoso-

phy as shall over match the Eddyites who, in claiming the impossible, often defeat their worthiest intentions.

All delayed convalescent states and sufferers have points in common. Those points may be visualized somewhat thus: (1) Those dominating the mind and feelings; the structural condition being subordinate. (2) Those of the structures being dominant as extremes of pain and weakness and danger; the mind being subordinate. (3) Those in which both mind and body suffer in effect about equally.

It might seem this last is the larger number. The only way to determine differences of degree is to acquire certain instinctive interpretations of the equation. This is done by keeping in mind the major factors as in the making of a picture displaying the whole.

The aim of healing is always to encourage the constructive, or rather reconstructive, powers in every way; the relieving from pain and other hindrances—physical or emotional or both. Omit in the search none which are promising for helping along the others. The term simultaneous treatment is a good one; the approach from several directions at once. Always cooperation is the main reliance.

There is always something hidden or self suppressed, or merely unrecognized, as a cause or causes for anxiety, worry, doubt, suspicion of worse things; in short some form of unhappiness. Among these are worries, lack of harmony between members of the domestic circle; next all the total socio-industrial situations, as of the bread winner of a family; or the *dread* of not being able to fulfill personal expectations of one's self.

The main objective in all unpleasant states (dysphoria) is to get rid of not only the cause but the disordered states themselves. Many dysphoric states are certain familiar and inevitable functional confusions. When they do not obtrude upon the inner consciousness (psyche) or rise above the threshold, then that person is likely to enjoy just as swift and sure progress in valency as his or her endowments in organic competence will warrant. The whole organism will tend to recover balance better as the mental attitude of the patient becomes improved.

Mental Convalescence

After care of those whose minds have become so confused, bewildered, as to have created grave suspicion of dethronement, demands careful and continued observation. This is true whether they are being treated at their homes, in private rooms, or in a regular sanatorium.

The brain and the instruments of the mind are subject to such grave derangement from mere physical disease that experts have stated that eighty-five percent of those declared insane or crazy, are then—or were earlier—curable by eradicating the bodily diseases, only fifteen per cent being true insanities. Indeed the belief grows that all mental disease is due to physical disease.

There are also those whose mentalities are well enough in some particulars but mildly diseased in others; in spots or areas or organ systems, especially of the digestive, elaborative or eliminative (metabolic) machinery, we may find the source of the mischief. Then there are some persons more highly sensitive as to their thinking and reasoning faculties, hence 90 per cent bad in their wits. For example: some persons when afflicted by fever states readily become mildly

(Concluded on page 106)

The Law of Contract and the Physician

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Historical Background

In early English history a distinction was made between a physician and a surgeon, which had a dissimilar effect upon the contractual relationship created between them and their patients. A physician was presumed to act in contemplation of an honorary reward only, therefore could not maintain legal process for the recovery of a fee. The only instance in which he could maintain legal action was upon proof of a specific agreement or promise on the part of the patient to compensate the physician for the medical services rendered.

A surgeon, on the other hand, was under no such disability and could in all instances maintain a law suit for the recovery of a fee due him for medical and surgical services rendered. The rule governing physicians was abolished by statute at a later period in England, (21&22 Vict.c 90).

The above discussed distinction between physicians and surgeons never was recognized in the United States.

As a prerequisite to the creation of a contractual relationship between the physician and his patient, it is necessary that the former be a duly licensed and legally qualified practitioner.

In some states, the statutes are specific in this matter and clearly state that a physician not duly licensed cannot maintain legal action for the recovery of compensation for services rendered. In those states where the statutes are silent on this point, the courts have ruled, practically unanimously, that even though the statutes are not expressive, a physician not duly licensed is precluded from successfully maintaining a law suit for the recovery of compensation.

The Type of Contract Created

The relationship of physician and patient simultaneously brings into being a legal relationship. The latter is contractual in character and falls into one of two classes:

1. Express contracts.
2. Implied contracts.

Express Contract.—This contract is one in which the undertakings of the parties to it are specifically stated or expressed. The expression takes the form of either written or oral words. This type is illustrated by the instance in which the patient agrees in advance of the rendition of the service by the physician to compensate the latter to the extent of a certain stipulated sum of money in consideration of the promise of the physician to perform a certain specified service, such as an operation.

Under this type of contract the physician recovers the sum agreed upon in the contract by submitting evidence that he has fulfilled his promise and rendered the service stated in the contract. Where the contract is express, a court will not enter into the question of the reasonableness of the stated fee unless the latter is unconscionable, in which case the court will interfere and reduce the fee to a reasonable sum.

A number of implications, which will be discussed under Implied Contracts, also arise in conjunction with Express Contracts and govern the conduct of the parties

in the same degree as in the case where they are specifically incorporated into the terms of the contract.

Implied Contract—Ordinarily the type of contract created by the physician-patient status is implied in character. This class of contract is one in which the law, basing its findings on the conduct of the parties, implies from their conduct that they agreed to do certain things.

The law virtually says to the parties, "You, by your conduct, have agreed to do the following—etc."

An implied contract arises from the situation in which a person calls upon a physician for medical attention and in response the doctor renders the requested services.

There is another type of implied contract which the law creates because of the justice of the matter and not entirely by reason of the conduct of the parties. Such an agreement is spelled out by the law in the case where a physician renders medical attention to a person who is in dire need of such attention, but for some reason, such as unconsciousness, is unable to seek or contract for such services. Here the law creates a fictitious contract between the physician and patient under the terms of which the patient is liable to the former for the reasonable value of the services rendered. In cases of this type the general rule in practically all jurisdictions is that under no circumstances may the financial status of the patient be taken into consideration in determining the value of the services rendered.

What is Implied Relative to the Patient

The law implies that the patient will pay for the services rendered him. The law further implies that the patient will pay a reasonable sum for those services.

The question naturally follows as to what is a reasonable sum in a given case and how is its determination arrived at.

1.—A physician's fee will be considered reasonable, if shown to be the customary fee charged by members of the profession of similar standing, in similar localities, and for similar services. To prove that the fee in question is a customary one, it is necessary to have the testimony of other physicians to the fact that for similar services in the same locality their usual charge is the same as the fee claimed in the case at hand.

Under the following circumstances a fee in excess of the customary charge will be considered reasonable;

(a) If the time at which the services were rendered was unusual, such as at late hours in the evening or early hours in the morning.

(b) If the place at which the services were rendered is at a great distance from the physician's office. The rule as to what distance from the office reasonably warrants an increased fee is one which is very elastic and depends on the locality, the number of physicians available, the conditions of transit and road conditions. As transit facilities and road conditions improve in character so also does distance recede as a factor in the determination of the reasonableness of a physician's increased fee.

(c) *Specialist's Fees.* It is the general rule that physicians who possess special skill and learning and render services which require such special skill and learning are entitled to a reasonably increased fee.

(d) *Character of disease or injury.* The courts will allow a physician, in the case where the reasonableness

of his fee is questioned, to show that the character of the disease or injury treated was such that the treatment necessitated by the disease or injury was of an unusual type. If the physician submits such evidence his claim for an increased fee will be allowed.

(e) *Professional Standing.* Proof of high professional standing will be taken into consideration in determining the reasonableness of an increased fee.

(f) *Loss of Practice.* Where a physician claims a larger fee by reason of the fact that because of attention to the debtor patient he suffered a loss of other practice, he is permitted to offer such proof only if he first proves that the patient requested his exclusive services. This means that where the patient does not employ the physician's services exclusively for himself, such patient is not liable to the physician for a fee larger than customary under these circumstances.

(g) *Financial Condition.* May a physician in calculating the value of his services take into consideration the financial standing of his patient? May he because the patient is possessed of wealth value his services at a greater amount than he would were his patient a poor man? It must be borne in mind that we are discussing an implied contract. In the case of an express contract it is obvious that this question does not arise, since the amount of the fee is determined by the terms of the contract.

On the above question there is a division of opinion. In some states the rule is definitely laid down that the financial status of the patient has an effect on the amount of the fee to be charged and may be taken into consideration in the determination thereof. In other jurisdictions the rule laid down is *contra*. In the states following the latter rule the following exceptions are made. Where there has grown into a custom the taking into consideration the financial condition of the patient in the fee determination, and such a custom is proven by a claimant physician, the court will allow such consideration on the ground that the implied contract entered into by the parties contemplated a determination of the fee based on the above stated custom (9 N. Y. St. 793).

(h) *Daily Income of Physician.* Evidence of the daily income is inadmissible in an attempt to justify an increased fee. This cannot be taken into consideration when calculating a fee.

(i) *Charges to Other Individuals.* Unless these charges are shown to be the usual and customary fees for similar services they are inadmissible as evidence to be considered in the determination of the reasonableness of a questioned fee.

2—In addition to the implication that he will compensate the physician to the extent of a reasonable fee, there is also implied an agreement on the part of the patient to follow and obey the instructions given him by the physician. This obedience of instructions given him becomes important in those malpractice suits in which the physician seeks to defeat recovery of damages by the plaintiff patient on the ground that the patient was himself guilty of contributory negligence in that he failed to comply with the instructions and orders of the physician.

3—*Liability to Third Parties.*

(a) *To Consultants.* A patient is liable to a consultant physician to the amount of his fee. This is true even though the patient proves an agreement between himself and his family physician wherein the latter agreed to pay all consultant's fees. In those instances where it is proven that the consultant had knowledge of such agreement between the patient and his physician, the consultant is bound by this agreement

and cannot maintain successfully an action for his fee against the patient.

Where two physicians are in attendance, their simultaneous visits at the bedside of the patient are not deemed consultations unless it is specifically requested by him to be such.

(b) *To Assistance and Students.* The patient is held liable for the fees of assistants if it is shown that the aid furnished by them to the physician was necessary. The fact that such assistants are not duly licensed and qualified practitioners does not bar their recovery of the fee from the patient. (*People vs. Monroe* 4 Wend 200).

What is Implied Relative to the Physician

The relationship of the physician and patient not only places a serious medical burden upon the shoulders of the physician but a burden of serious legal import as well. At present this legal onus is not as well understood as it might be with the result that it is not given the serious attention it merits.

When asking a court to hold a patient liable to the patient's implied promises, it is necessary for the physician to prove satisfactorily several things:

1. Right to Practice Medicine. The physician has the burden of proving that he is a duly licensed and qualified practitioner of the state in which he institutes his action against the patient. The fact that he is a physician is in itself insufficient. He must possess a license to practice his profession. In some states there are statutes which specifically prohibit unlicensed physicians from maintaining an action for compensation for services rendered. In those states in which there are no statutes prohibiting the maintenance of such an action by an unlicensed physician, the courts practically unanimously hold that even though there are no prohibitive statutes in those states, a physician, not having complied with the statutes requiring the holding of a license to practice, may not maintain an action for compensation.

Case: *Holland vs. Adams* 21 Ala. 680.

A, physician, had attended X professionally and was now suing X for the amount of his fee. X showed that A did not possess a license to practice medicine and the court ruled that A could not recover.

A, the unlicensed doctor, then devised the following scheme in order to avoid the difficulty encountered in his suit against X.

Having attended Y professionally, he obtained from Y a note for the amount of his fee. The note not being paid he instituted an action for the recovery of its value against Y.

Y set up the defense that doctor A was an unlicensed practitioner. The doctor replied that he was not suing as a doctor but was instituting an action on the note. The court held, however, that even though A was suing on the note, the defense that he was unlicensed was valid since his possessing a license was one of the considerations upon which the note was given.

2. A physician must show the court that he exercised a degree of skill, care, judgment and diligence required by the law. This will be discussed further in a paper dealing with malpractice.

3. Where a physician institutes an action against a patient based on an express contract in which the physician agreed to effect a cure of the patient's ailment, the plaintiff physician must prove to the court that he has fulfilled his agreement and has effected such a cure. Failure to show this precludes the physician's recovery.

A person having a legal right against another must enforce that right by legal process within a certain length of time or he will be barred by the courts from so doing

if the time within which that specific right must be enforced elapses.

The time within which a certain right is actionable depends on the statute governing the particular right in question. These statutes are called Statutes of Limitation, for they limit the time within which an action based on a certain right may be brought. As a general rule statutes governing contractual rights allow a longer period of time within which such a right can be sued upon than do those statutes governing rights based on tort.

This means that a physician has a longer period of time within which to bring an action for his fee against a patient than that patient has to bring action based on malpractice against the physician.

Since an action for malpractice cannot be brought after the period of limitation has run, so also is a defense of malpractice barred in an action by the physician for his fee; the limitation for the contract action by the doctor not having run out.

It follows that where an action against his patient for the recovery of a fee is contemplated by the physician and there is a possibility of the patient defending such an action with a counterclaim of malpractice, it is best for the physician to defer his action until the statute of limitation has run against the malpractice defense.

Defenses Set Up by the Patient in an Action by the Physician for the Fee

A. That the plaintiff physician is not a duly licensed and qualified practitioner in the jurisdiction where the action is brought, is a good defense in all cases except where a physician from a neighboring town has been called in an emergency to treat a patient. In such a case the physician will be permitted to recover even though he is unlicensed in the state where the patient is a resident. This exception is limited to cases where emergency is a factor. It is not a good defense in an action by a physician for his fee, that he is not registered in the city where he is practicing as required by a city ordinance which imposes a penalty for non-registration. It is sufficient for the physician to show that he is a duly licensed physician of the state in which he institutes his action.

B. Showing that the physician because of his failure to exercise the proper degree of skill, care, judgment or diligence has caused the patient to incur damages to the amount of the doctor's bill will defeat the latter's recovery.

When a defendant patient in a suit by a physician for compensation sets up as a defense the malpractice of the physician, he is later precluded from bringing an action against the physician for damages based on the alleged malpractice. In the case of *Leslie vs. Mollica* (211 N. A. R. 267) it was held that this rule applied whether the defense of malpractice in the first action was set up successfully or not.

C. Showing that the physician at the time the services were rendered was intoxicated to a degree sufficient to render him incompetent will bar the recovery of compensation by him.

This defense cannot be set up successfully by a patient who, knowing of the doctor's inebriety, continued to employ him.

D. A defense setting up the failure of the plaintiff to attain a beneficial result by his treatment will not bar recovery of compensation, except in those cases where a beneficial result or cure was expressly agreed upon. In the absence of such an agreement the courts will allow the plaintiff to recover his fee on the ground that in a legal sense the rendering of services is beneficial

in which the required degree of care, skill, diligence, and judgment is exercised.

E. A defense that the school of medicine of which the plaintiff is a follower has no merits will not be sustained where it is shown that the patient voluntarily chose and engaged the plaintiff.

Liability of Third Parties to the Physician

The general legal principle, that when a third party requests that a service be rendered to another and such a request is complied with, the third party is liable for the value of the service to the one rendering the service, is not so readily applied to the instance where a third party requests a physician to render medical aid to another.

In order to hold liable such a third person for the value of the medical services rendered there must be shown the existence of such a relationship between the parties as to create a legal obligation on the part of the third person to furnish and pay for the medical services needed by the other. On the other hand should such a relationship not exist the liability of the third party may be spelled out from his conduct, from which may be implied an intention on his part to pay for the requested services. In some jurisdictions the person requesting the services is held liable for their reasonable value unless he indicates to the physician that he is merely acting as an agent or messenger for the patient.

Husband and Wife.—When a husband and wife are living together the husband is liable to the physician for the value of his services rendered the wife even though they were rendered at the request of the wife alone. When a husband and wife are living apart but the latter is still being supported by the former, the husband is also liable to a physician who renders his wife medical attention. When the husband and wife are divorced and the husband-wife relationship no longer exists, the above rule of liability ceases to apply.

In cases where it becomes necessary to perform a surgical operation upon a married woman living with her husband, her consent, either expressed or implied, as when she voluntarily submits to the operation, is sufficient to impose the liability for the surgeon's fee upon the husband.

Parents.—When a physician renders medical services to an infant (a person under the age of majority), in need of such attention and the infant is away from home, the law implies an agreement on the part of the parents to pay for such services, even though the infant is self-supporting, as long as the infant is still under control of the parents.

If the infant has been emancipated by the parents the implication above stated does not arise.

Where the parents are divorced, both or either is liable for the value of the medical attention rendered an infant depending on the law of the state where the question arises.

There is no implication that a parent will pay for the services rendered his child who is past the age of majority. The liability in such a case is primarily the child's. To hold the parent liable in this instance a promise, either expressed or implied, to pay must be proven.

It must be borne in mind by a physician that when he renders medical aid to an infant he does so at his peril relative to the recovery of his fee, for the infant may have been emancipated by his parents in which case they are not liable, and the patient because of his age cannot be successfully proceeded against legally.

Master and Servant.—A master's relationship to his servant in the matter of liability for medical fees is that

of a third party. In order to hold a master liable for the value of medical attention rendered his servant it must be shown that the master expressly or impliedly agreed to pay for such services.

Employer and Employee.—When a physician renders services to an employee of a corporation or non-incor-porated employer at the request of one who represents the employer as agent, the physician has a right against the employer for the payment of the fee for the services immediately rendered. Since the agency of the one originally requesting the service may be limited in character, the employer may not be liable for the value of any future treatment rendered unless the employer re-quests future treatment either in writing or through

someone authorized to speak for the employer. Of course if the original agent is competent to contract for future treatment and he does so, the employer is held liable.

It is therefore always advisable to obtain the ratification of the employer before rendering further treatment in those cases where the physician is originally engaged by an agent of the employer, for it may happen that this agency may be of limited powers and extend merely to the engagement of medical aid for the first emergency treatment.

If the employee in the first instance engages the physician the employee is primarily liable and the em-ployer liable only if he agree so to be.

11 Park Place.

The Watering Eye

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If folks would only realize that a WATERING EYE needs an eye specialist, there would be less than, in-stead of more than, one hundred and forty thousand yearly visits to the Brooklyn Eye & Ear Hospital.

The reaction to a WATERING EYE is usually: boric acid, family inspection, the corner druggist, friends, relatives, acquaintances, another druggist, tea leaves, an eye stone (the dirtiest thing), the whole story over again, the family doctor, argyrol, yellow oxide of mer-cury, back to the family doctor, an eye specialist sug-gested.

A week later his advice is sought.

What Does He Find?

The simplest and most common form of WATERING EYE is from Corneal Irritation. Corneal Irritation, if kept up, finally results in opacity, and opacity often results in permanently impaired vision.

The WATERING OF AN EYE is only the most obvious symptom—Others are present. Corneal Irrita-tion is typified by:

- I. Lacrimation—(Watering).
- II. Photophobia—(light hypersensitiveness).
- III. Pain.

The most common cause of Corneal Irritation is a speck of dirt in or on its surface.

The term "foreign body" has come to be universally applied, because when removed, the first question is "What is it?" It is not hard to answer "A foreign body." This foolish inquiry is sometimes of quite some legal importance, but would require one highly skilled in micro-chemistry to answer. Result—a guess, which is usually, but not always, sufficient. A small, black speck of foreign material directly on the center of the cornea, if placed against the black background of the pupil, is well nigh invisible to ordinary means of examina-tion. A light colored speck against a light iris is also easily overlooked. Even quite a large particle at the edge of the cornea is easily overlooked.

The nearer we approach the center of the cornea, the more nerve endings do we find per millimeter of surface. As we near the edge, the wider are the nerve endings separated. A foreign body one millimeter in diameter might irritate 100 nerve endings in the area corresponding to the pupil, whereas, if located at the edge of the cornea, it might only affect one or two end plates. Pain is therefore excruciating if the foreign body is located centrally, and is often absent if located on the periphery. The corneal substance is hornlike

(cornu) in hardness. The nerves penetrate this and terminate under the softer epithelial layers.

The corneal nerve endings are covered only by this extremely thin epithelial membrane. They are thus in a very exposed position. They are irritated even by drying of the epithelium. When we stare without winking for a few seconds TEARS are evoked—A WATER-ING EYE.*

Before giving up the search for a foreign body on the cornea, seek it with a magnifying glass and a strong artificial light striking the eye slantwise. Slantwise light causes larger shadows and makes sharp contrasts so that minute particles are more conspicuous. Patients' descriptions of the location of a scratchy feeling are seldom helpful. The wrong tooth has been pulled from such information because Hilton's Law can mis-lead so easily.

If the foreign body has been removed the eye may still water and feel as if the offender had been left there. A small scratch or lesion of the cornea is in a position similar to a cut on a knuckle; every time the joint is flexed the cut is opened,—every time the lid rubs, the scratch is opened. To fix the lid with a snug dressing is not enough, because the fellow eye keeps the injured one moving about. If both eyes are closed with cotton pads held tightly by a head bandage and the patient sleeps a few hours, the cut heals easily. Quite an extensive area denuded of epithelium can be recovered by three hours rest. It is easily opened again by a thoughtless rub. Be careful on opening the eye. It is sometimes an abrasion, easily overlooked, that becomes infected and lands the patient in the hospital with a disastrous corneal ulcer.

But where did the foreign body go? Off the cornea does not always mean that it is out of the way. The under side of the upper lid (next to the eye) near its edge has a small shallow furrow. The furrow is a wonderful place for specks to become securely lodged. They cannot be seen unless the lid is turned inside out.

* The reflex of winking may easily be demonstrated by holding a power-ful magnifying glass close to the eye while gazing at a bright light placed a few yards away. The light is thus out of focus and is seen as a blurry disc—like the face of the moon. There are innumerable little specks and spots over its surface—by winking and moving the eye we can demonstrate that some are formed by dust, by bubbles and by moisture on the surface of the eye. If we hold the eyelid open with the fingers to prevent winking, the moisture soon evaporates and a burning sensation develops. Just as this become intolerable, we see the surface of the moon-like spot break out in innumerable pin-point dots—the drying of the epithelium—the nerve endings are stimulated to send the impulse centrally, crying for a muscular response to draw down the lids and anoint the cornea with the protecting fluid.

Everting a lid is easy enough if one understands what he is trying to do. The upper lid is stiffened by a cartilage-like plate (tarsal plate) which extends from the lid margin up about a quarter of an inch. This prevents *rolling* the lid up, it must be *hinged up*. We can roll back the pages of a book but not its stiff cover. The upper edge of the tarsus may be regarded as a hinge about which the lid is to be turned back. If the subject looks *downward* and the lashes are grasped by the examiner, a downward outward pull will draw the lid away from the eye so that a match or tooth-pick may be laid horizontally at the upper edge of the tarsus (about $\frac{1}{4}$ inch from its lower edge) and the lid may then be swung up like turning back the cover of the book.

A foreign body not found and removed in a few hours needs an eye specialist's help and is entitled to expert skill, especially if there is corneal ulceration or if there has been from the first a penetrating injury. Occasionally we have a patient who has been working with steel; a small portion flying with tremendous force penetrates the globe, perhaps an inch deep, and the patient hardly notices the occurrence until serious complications set in.*

Corneal irritation comes about in other ways—artificial sunlight lamps produce very marked lacrimation by injury to the cornea through direct exposure to the ultraviolet end of the spectrum. Operators of these actinic lamps find that once or twice they have escaped without annoying consequences. This gives them a feeling of security, so that, sooner or later, they get their just desserts. The lacrimation and photophobia are often delayed in onset until a number of hours after exposure so that the relation of cause and effect is not obvious. These people need an eye specialist not so much for the condition existing, as to drum into their heads the danger to lens, iris, retina, and ocular circulation, dangers not noted until well-advanced lesions have been produced. The treatment of the corneal distress is mainly symptomatic, but occasionally careful management is needed promptly, as complications sometimes arise.

Old folks after a paralytic stroke, and other folks greatly weakened by some protracted disease, do not keep their eyelids tightly closed in sleep. The lower part of the cornea may then dry off and become very painful or even ulcerate, with no other symptom than a WATERING EYE. Sometimes simply keeping the lids closed by the use of adhesive straps is sufficient to restore the eye to normal—sometimes the eye is lost in spite of heroic measures.

There is one other condition in which corneal irritation is primarily responsible for WATERING THE EYE—the scratch of its surface by an eyelash. Children are sometimes born with an inverted eyelash or with a whole row growing inward. In certain diseases—commonly in trachoma—the contraction of scar tissue turns the lashes in and a similar scraping of the cornea results. These conditions are relieved by epilation, electrolysis, or plastic surgery. WATERING OF THE EYE as called forth by corneal irritation seems to be an effort on the part of nature to throw off the offender or combat an irritant by dilution or anti-bacterial bodies.

Corneal irritation as a cause of A WATERING EYE is perhaps the most obvious and easily corrected. There are other causes.

The tear gland is located at the outer upper angle of the orbit and behind the bony rim. Cases have been reported in which a primary hyperactivity of the lacri-

mal gland has been noted. This is a rare cause of WATERING EYES (excessive production of tears). Very common, however, is WATERING due to dysfunction of the normal channels of escape for tears. Tears are manufactured constantly in quantities varying according to the demand. There is a flow from the glands down and across the eye to the nasal angle. Here a little puddle or lacus is found into which the tiny mouths of the lacrimal ducts—upper and lower—dip. These small pores are the open ends of the ducts which pass inward towards the nose to open into a small pouch—the lacrimal sac. This sac has a syringe-like action in sucking the tears out of the lacus and passing them into the nose through the nasal duct. In the nose, evaporation takes place slowly.

Physiologically we have excessive tear production—crying. When the flow is too fast we first notice their appearance in the nose—the running nose of a crying child—and when they overflow down the face. When this occurs from corneal irritation it often gives rise to the idea that there is also a cold in the head.

It is obvious that besides the excessive quantity of tears causing an overflow, obstruction of the passage ways may also cause an overflow of the normal quantity.

A few weeks before birth the nasal duct should become patent—it is formed by a downward extension from the tear sac and an upward growth from the nasal cavity. These two little tubes meet and the last act is the rupture of the thin membrane marking their site of union. Occasionally this does not take place, so that when infants begin to manufacture tears we find that they run down the cheek instead of within. These cases need special measures before complicating troubles arise in the blind pouch. Massage and probing give good results. There is a family tendency.

Most obstructions to the nasal duct in adults can be traced to the nose. The x-ray, using special technique, helps to localize the site of obstruction. Occasionally stones and inflammatory processes originate in the tear sac or lacrimal ducts.

The relaxed tissues of old age often allow the lid to fall away from contact with the globe so that the mouths of the tear ducts cannot take up the flood—result, the moist-eyed old man.

Other conditions giving rise to the WATERING EYE are more complex and obscure. Irritation of the fifth nerve and a bad dental condition, nasal inflammatory processes and foreign bodies are commonly recognized.

Serious ocular conditions ushered in by WATERING of the eye are: cataract, glaucoma, and retinal diseases. If the symptom of WATERING EYE is recognized once in a hundred times as the danger signal of these insidious disasters, ophthalmology has served a purpose.

It may justly be said that "a pusy eye" is less dangerous than a WATERING EYE.

23 Schermerhorn Street.

Nine Medical Colleges Pass the Century Mark

The following tabulation will be of interest in noting the time of service of centenarian medical schools in this country. This year the University of Pennsylvania School of Medicine begins the one hundred and sixty-third session; Harvard University Medical School begins the one hundred and forty-sixth session; University of Maryland School of Medicine and College of Physicians and Surgeons begins the one hundred and twenty-second session; Columbia University College of Physicians and Surgeons begins the one hundred and twenty-first session; Yale University School of Medicine begins the one hundred and fourth session; Jefferson Medical College begins the one hundred and fourth session; University of Virginia Department of Medicine begins its one hundredth session; the Medical College of the State of South Carolina begins its one hundredth session; and the University of Georgia Medical Department begins its one hundredth session.—*Virginia Medical Monthly*.

* The writer has seen a man refused compensation because he could not state the exact instant a speck struck his eye—the pain developed later.

Some Observations on the Management of Acute Inflammation of the Middle Ear in Adults*

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The treatment of acute inflammation of the middle ear in adults, and the same thing in the very young, are quite different problems. Infection of the middle ear in the very young is much more frequent than in the adult. This is largely due to the increased presence of lymphoid tissue in the former and more especially to the anatomical structure of the eustachian tube itself. This tube in the very young is shorter, larger in caliber, and has not the aid of the tubo-palatal muscles in opening and closing the nasopharyngeal orifice. For this reason rough operative procedures in removing adenoids are liable to complicate matters still more by causing some paresis of these muscles. All infections of the middle ear come from the nose or naso-pharynx.

The fact that young children cannot forcibly remove the large amount of infective catarrhal secretion which accumulates during the course of a cold, adds to the frequency of middle ear infection in this class of cases.

The severity of middle ear inflammation depends upon the pus-producing organism, and, almost equally as important, the power of resistance inherent in the individual. Children of the so-called scrofulous tendency are especially liable to severe infections and complications.

A severe, acute inflammation of the middle ear has the same pathology whether in the adult or the very young. Rarely do we find what is denominated as pure pus when the drum of an acute ear is incised. Only in the most intense infections do we find this condition. Bloody serum follows a puncture but becomes pus in a few hours or days depending upon the virulent organism. Early syringing of an ear adds to the possibility of increasing the infection. For this reason it has always been my practice to use sterile pieces of wick cotton in the external canal to promote drainage and to change as frequently as the wick becomes saturated. I am sure this method has prevented many cases of mastoid complications.

In the adult the management of these acute middle ear inflammations can be treated differently than in the very young because one is able to treat the middle ear through the eustachian tube. It is by no means necessary to puncture the drum of every adult patient who suffers with an acute involvement of the middle ear, even if the entire drum is congested or even if you are confident that some exudate is present in that cavity. Of course, I do not mean those cases where the drum is bulging, the pain unbearable and of a constant nature, and where the temperature is up several degrees. I mean those cases where there is periodic earache, bubbling sensation when the patient swallows, and where there is not over one-half or one degree of temperature. The middle ear can in these cases be treated and drained through the eustachian tube. Too many otologists have neglected this mode of procedure. One must have considerable fluid in the middle ear before it is drained out naturally through this tube.

Let me briefly describe a case:

An adult consults you with the complaint of severe earache the previous night, but after an aspirin tablet and hot water bag the pain subsided. At present the ear is entirely stopped up, with occasionally a darting pain and some bubbling in the ear. Inspection shows the canal around the drum red and congested. The drum itself is congested but a small portion still retains its pearly luster. Hearing reduced one-half.

One or two treatments can nearly always relieve the patient.

The congestion of the nose on the affected side is relieved by weak cocaine solution so as to allow the passage of the eustachian catheter and the nasopharyngoscope. If any mucus is seen coming out of the tubal end, suction through the catheter is first used and this tube freed as far as possible. Then adrenalin solution is injected through the catheter into the tube and middle ear. In a few minutes there is passed up to the isthmus a wire on which is a pledget of cotton soaked in nitrate of silver solution two per cent., followed by very gentle inflation of compressed air with a drop or two of chloroform inhalant. Phenacetin and salol, three grains each, are given every three hours as a routine procedure for two or three days. Hot water bag at home in conjunction with infra-red light at office. Careful instructions are given in reference to blowing of the nose. All inflammatory congestion in nose and throat must be appropriately treated. Pain can almost instantly be relieved by thorough cocainization of the sphenopalatine ganglion region, and this method is applicable in a limited degree to children.

Such procedures in the acute middle ear inflammations in the adult can in the large majority of cases relieve the symptoms, restore the ear to its normal function, and thus save the patient from a protracted illness. Bear in mind that this procedure does not always produce these results on cases of intense infection of the middle ear where the fever is high, the pain intense, and there are all the symptoms of an accumulated amount of exudate behind the drum.

The great trouble with the majority of otologists is the fact that, in the season when these cases occur, they are so busy as to be unable to give time to such an abortive treatment, feeling rather that a punctured ear drum does not harm and the after syringing of the external canal can easily be delegated to the office nurse. Let us be more humane to our patients both from an economic and a financial standpoint. A discharging ear is always a source of danger, and, if one will follow up the statistics of mastoid operations, he will find that repeated syringing of the running ear has aided this mastoid involvement.

One other observation made during my two weeks stay last summer in Copenhagen:

Dr. Gunner Mygind of that city is doing considerable original work along the line of the involvement of the semicircular canals in those obscure cases of vertigo and dizziness with slight degrees of lowering in the upper tone limit, showing the involvement

* Read before the Atlanta Academy of Medicine, Jan. 17, 1929.

at the same time of the acoustic portion of the labyrinth. I had the pleasure of going through the wards with him and assisted in the tests of a number of patients.

His theory is this: A certain number of individuals suffer with varying degrees of intermittent deafness accompanied by slight nystagmus and dizziness. Many of these individuals are predisposed to obesity, or make no effort to prevent it. In many of the cases the very first symptoms are those of defective hearing. After studying these cases carefully for over two years, making all the various functional tests for hearing, measuring the watery output of the system through the kidneys and alimentary tract, and ascertaining the condition of the endocrines, especially the pituitary, he noted that these patients had a thick, leathery, infiltrated condition of the subcuticular tissue between the shoulder blades and in the calves of the leg, associated with increased tenderness on grasping the tissues.

This condition he believes to be due to an intercellular—not intracellular—filtration of water in the tissues. He also believes that the same condition as recognized in the legs and back has also its counterpart in the labyrinth of the internal ear. Hence the labyrinthine pressure producing nystagmus, giddiness and a lowered tone limit. He believes also that the same condition is found in the so-called edematous or hyperesthetic rhinitis, in that relief for this is frequently found in the same line of treatment.

This treatment or regimen is as follows: If the

patient has a tendency to obesity this is reduced through proper diet but more especially by elimination of salt from the diet. Rest in bed with proper massage. A complete daily tabulation is kept as to amount of intake and output of fluids. To aid diaphoresis in bed and the elimination of fluid from the body, one-half c.c. of salyrgan is given intravenously every two or three days. This preparation is made in Germany but can be obtained from druggists in the United States. Salyrgan is one of the latest diuretics introduced for alleviating edema in various parts of the body. In the December 29th issue of the *Journal of the American Medical Association* there appears a very interesting article on the use of this remedy in edema by Drs. M. H. Barker and Joseph P. O'Hare of Boston, Mass. The statistical data were obtained through the use of this remedy in the Peter Bent Brigham Hospital. It was employed in all classes of cases where edema existed, but more especially in those of cardiac and renal origin. The results obtained were unusually effective and evidently salyrgan bids fair to assume first rank in the list of diuretics and diaphoretics. It was remarkable to see the improvement in the Copenhagen patients, especially in their defective hearing. No local aural treatment was given.

Whether or not this theory will stand the clinical test of time remains to be seen, but certainly a continued investigation by others is well worth the trial. In your daily medical routine it may aid you to bear in mind these theoretical and clinical data.

Mind, Emotion and Body (Concluded from page 99)

delirious; others in blazing fevers seemingly not at all. Given ample time and continued favorable conditions the semi—or partially insane, may become again "white as snow."

Then during illnesses wherein the mental faculties are disordered evil habit paths often become formed which require unusual care to reform and to inculcate better and safer ones by sufficient training.

During the period of dubiety in the reasoning faculties some extra stress may be exerted which throws them off their poise. Then disasters—large or small—ensue. The afflicted ones may have so little balance that they give way to some lingering morbid impulse or obsession or explosion of emotion, temper, jealousy or sense of embitterment or despair or revenge so that they may proceed to wreak their disordered impulses on some wholly innocent person.

This perturbation often happens; sometimes long after one has apparently quite recovered. Only a high class and experienced expert can determine the conditions for safety. Even then some catastrophe may and does arise. Even though such calamity does not happen, a man or woman who was entirely curable may commit some overt act during the time when the sense of proportion between impulse and act is sick. They may behave in such a way as to impair their reputation for all time. Worse yet: the memory of such indiscretion may so react upon their minds as to create the belief they were, and still are, irresponsible. This would not happen to really insane persons; they are quite insensible to such fine distinctions.

When, in the progress of an illness affecting the mind, the mental symptoms all seem to disappear,

but the expert be not so sure, tremendous, often fierce and acrimonious pressure is brought to bear on the physician in charge, or—if an asylum—on the management to give the case full freedom. This pressure is exerted by family, friends, employers, busybodies, and usually some lawyers. They allege they "have the evidence of their senses and adequate facts to prove them right." Rather they are self-confined in their preferential beliefs.

This is a most hazardous situation, as yet dealt with in semi-barbaric fashion. The civil law is admitted to be pitifully inadequate in matters of "soundness and unsoundness of mind," testamentary capacity and the like.

Admitting that in some instances the mental expert errs in being too cautious, it is an error on the side of safety and nothing worse can occur than a trifling delay in freedom. Remember we are dealing with conditions of mental shock. Here we may cite Richard Croker's definition of the honest man: "That man is honest who when bought will stay bought." That mental case is cured who will stay cured.

1504 Pine Street.

Treatment of Hay Fever

T. P. Lowe (*Lancet*, 1928, I, 1302) gives a method evolved by experiment on himself for treating hay fever. It consists in spraying the nostrils with a 1-per-cent solution of picric acid in water every day for about a fortnight before the onset of symptoms, and in giving 3 gr. of zinc valerianate in a pill three times a day during the whole of the hay fever period. Cases which have not come under observation before the attack may be treated in the same way, but before using the picric acid it is necessary to reduce the swelling of the nasal mucosa by spraying with adrenalin chloride solution 1 in 1,000. When picric acid is used for hay fever the spray should be a very fine one, practically a mist, and the patient instructed to keep the mouth wide open, and to breathe deeply during the process, thus preventing any of the solution from getting into the larynx.

Ovarian Cysts Complicating Pregnancy*

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Myomata of the uterus complicating pregnancy seldom require surgical operations, but ovarian cysts discovered during gestation, labor or the puerperum with very few exceptions call for surgical interference at once.

In the presence of fibroids one must know the exceptional case requiring operation; on the other hand, when cysts are found, one must know the exceptional case not requiring operation or when not to operate.

The following cases are presented to illustrate different phases of pregnancy accompanied by ovarian cysts.

CASE ONE.—Mrs. M. W., aged 34 years. Tertipara. Family history negative. Personal history: Measles during childhood. Operated for appendicitis with peritonitis during scarlet fever at age of 25 years.

Married at age of 30 years. The two preceding pregnancies and labors were normal and the post-natal pelvic examination revealed no tumors or other pathology.

Menstrual history normal; last menstruation June 22nd, 1927.

During the later part of September, 1927, in the third month of pregnancy, patient began to have dull, aching, intermittent pain in the left lower abdomen. Pain did not radiate and subsided completely in a day.

One week later sharp pains occurred in the same area and lasted three days. Pelvic examination revealed a four months intra-uterine pregnancy with a mass in the left lower abdomen about the size of a grape fruit, movable and quite tender.

X-ray examination revealed a mass to the left side of the pregnant uterus, though not well outlined, and containing two spots which were thought to be teeth in a dermoid cyst.

Laboratory reports Urinalysis: alkaline; albumen trace; sugar negative; leucocytes few; no casts. Blood count; hemoglobin 78; red cells 4,100,000; leucocytes 8,600.

OPERATION.—Admitted to the Misericordia Hospital October 9th, 1927, and operated upon under ethylene and ether anesthesia. Abdomen opened through a midline incision. Examination of the pelvis showed the left ovary to be enlarged, cystic, and about 10 centimeters in diameter.

The cystic ovary was excised, the raw surface peritonealized, and the abdomen closed without drainage.

Convalescence was entirely uneventful, except for slight post-operative nausea and vomiting for a day following operation.

Patient discharged from hospital in good condition on October 22nd, 1927.

LABORATORY REPORT.—Specimen measures 12 x 8 x 4 cm. Cyst filled with sebaceous material containing hair and two well formed teeth.

The pregnancy continued to full term and the patient was readmitted to the Misericordia Hospital, March 22nd, 1928, and delivered of a six and one-half pound male child.

The presentation was breech. Baby fully formed and perfectly normal.

Mother and baby discharged in good condition on April 6th, 1928.

CASE TWO.—Mrs. K. J. Aged 26 years. Primigravida. Family and personal history negative. Admitted

to the Misericordia Hospital October 15th, 1927. Examination showed an intra-uterine pregnancy at term with child in transverse position.

Pelvic examination revealed a large cystic mass filling entire pelvis; the cervix, after some difficulty, was found under pubes and admitted the tip of one finger.

X-ray examination of the abdomen showed a full term pregnancy with child in transverse position.

Diagnosis made of a large ovarian cyst complicating labor.

Laboratory reports—Urinalysis: trace of albumin but no other finding. Blood count: hemoglobin 60%; erythrocytes 2,480,000; W. B. C. 6,100. Vaginal and cervical smears negative for gonococcus. The pelvic measurements were normal.

OPERATION.—Under ether anesthesia abdomen was opened in midline. Exploration revealed a bicornate uterus, with child in transverse position, the head being in the right cornu, and a large ovarian cyst lying in the pelvis and obstructing delivery.

A low Caesarean section was performed and a normal full term child delivered. Placenta and membranes delivered, uterus and vesico-uterine peritoneum closed. Cyst dislodged from pelvis with difficulty, cyst and ovary excised and stump peritonealized, abdomen closed without drainage and patient left the operating room in good condition.

Convalescence was entirely uneventful and mother and baby were discharged in good condition on November 2nd, 1927.

Laboratory report—Multi-ocular ovarian cyst containing 1000 c.c. pseudo-mucin material.

Ovarian cysts occur about once in fifteen hundred pregnancies; most of them are relatively small and in the pelvis, but even a small one may effectually block the birth canal.

Frequently ovarian cysts rapidly increase in size after conception. Occasionally the growth is rapid and enormous.

Often the presence of the cyst causes no symptoms at all, or only moderate discomfort or pains attributed to the usual disturbances of pregnancy, but, if the cyst grows to considerable size, the combined size of the uterus and cyst causes marked discomfort, sometimes severe pain and serious interferences with the functions of heart and lungs.

The usual accidents to ovarian cysts that occur in the non-pregnant are even more apt to occur during pregnancy.

According to McKesson, twisted pedicle has an incidence of eight per cent in the non-pregnant, twelve per cent in the pregnant, and twenty per cent in the puerperium.

Incarceration in the pelvis is the more common due probably to the enlarged uterus and possibly to the rapid growth of tumor.

Rupture of the cyst and suppuration are not frequent.

Necrosis occurs, probably due to pressure, and is exceptionally common in the puerperium, due to injury during labor.

Malignant degeneration in ovarian cysts is not more common in pregnancy. G. Born ascribed to the corpus luteum the rôle of a gland of internal secretion. This gland has a trophic influence on the uterus and its

*Read before the clinical conference of staff of Misericordia Hospital, from the Obstetrical Department of Misericordia Hospital.

principal task is in connection with the insertion and development of the fertilized ovum. Frankel states that removal of the corpus luteum of pregnancy causes interruption of the pregnancy. It is not always possible to preserve the corpus luteum during ovariotomy on a pregnant patient, but it is very doubtful if the corpus luteum has any influence upon the growth and development of the fetus after the eighth week.

J. Szmanowicz, in the *Journal Gynaecology et Obstetric*, Paris, December, 1922, reports the results of thirty-five cases operated during gestation, with miscarriage after operation occurring only in 8.5% of the cases.

About twenty-six per cent of the pregnancies complicated by ovarian cysts will abort, so a carefully performed operation will tend to conserve rather than interrupt the pregnancy.

Diagnosis is easy if the cyst is in the pelvis, but it is often missed if the cyst is small and behind the uterus.

In differentiating between myomata and cysts we must not forget that cysts, not rarely, feel as hard as fibroids, and myomata may sometimes feel as soft as cysts.

Differentiation between a large cyst in the pelvis during labor and hydramnios may cause some difficulty, but in hydramnios the cervix, though fully dilated, may be palpated, and it is possible to determine that the fluid is within the uterus.

Cysts complicating pregnancy should be removed by abdominal section rather than by vaginal operation, as the latter entails greater difficulty and danger of infection.

It must always be remembered that the child should never be dragged past the tumor, because the results to the mother are exceedingly disastrous, and on account of injury to the tumor, which may be followed by necrosis and infection.

We should be impressed with the dangers of forcible delivery when we know that nearly one-third of the mothers die.

Puncture of a cyst in the pelvis, obstructing delivery, is unwise because of the danger of peritonitis, particularly if the tumor be a dermoid or infected.

Forceps, version and the tapping of a cyst as a means of overcoming the dystocia produced by ovarian tumors are absolutely contra-indicated. Small cysts, and those not causing symptoms, nor showing a tendency to prolapse, thus obstructing labor, may be permitted to remain until the puerperium, but all cysts that produce symptoms, tend to interfere with delivery, or, on account of location may suffer injury and subsequent necrosis, should be removed by abdominal operation.

Conclusions.

Ovarian cysts complicating pregnancy, labor or the puerperium are always dangerous. The presence of a cyst is a distinct menace in itself. With rare exceptions it should be surgically removed as soon as discovered, whatever its size, type or location.

A carefully performed operation will tend to conserve rather than interrupt the pregnancy.

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Pregnancy With Complications: Syphilis

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BESSESEN CLINIC

Of two hundred pregnancies, four had syphilis. According to other statistics this is an unusually low percentage. Careful search has been made for the disease in all obstetric patients. Of these syphilitic mothers, three had treatment during pregnancy and one also prior to pregnancy. The babies of the treated mothers showed no evidence of syphilis during the first six months of life. The child of the untreated mother was a macerated stillbirth.

Syphilis is an extremely serious complication of pregnancy for both mother and child, especially the latter. The figures of McCord, Boas and Gammeltoft are indicative that ninety to ninety-six and a half per cent of untreated mothers, or those receiving mercury during gestation, give birth to syphilitic babies; while those treated before and during gestation with both arsenical and mercurial compounds may have eighty to eighty-five per cent uninfected babies.

The symptoms of congenital syphilis as seen at birth are macerated fetus in one-third of cases; placenta pale, greasy and bulky—it may weigh one-fourth of the weight of the fetus; the liver may weigh one-twelfth instead of the usual one-twentieth of the total birth weight; the spleen weighs more than the usual one hundred and fiftieth; chondroepiphysitis is very common. Shortly after birth, at about two months, syphilis produces snuffles, shiny palms of the hands and soles of the feet, rhagades

and fissured anus and mouth. At fourteen years or so, Hutchinsonian teeth and keratitis commonly present.

A clinical history of syphilitic infection is obtained more often in primiparae than in multiparae. The physical signs of scars, gummatous, and leucoderma, though routinely looked for, are seldom found. Syphilitides are much more likely to be present, but one can seldom secure a full term living child when they are present, because of the tendency to abortion and miscarriage. A history of repeated stillbirths, abortions, and premature deliveries is very suspicious and should lead to careful examination of both parents. The positive Wassermann has been, in our hands, the most accurate test. The reason is likely that syphilis with pregnancy has not been far enough advanced to show nerve findings, but other diagnostic lesions have become quiescent. It has therefore been our custom to consider a physical examination incomplete without routine serologic tests.

The earlier in gestation the diagnosis is made, the better is the outlook for both patients. It is far more favorable if one can detect the luetic infection prior to pregnancy and start treatment at that time. The diagnosis is not often made prior to pregnancy; the woman who knows she has syphilis avoids pregnancy.

The best possible treatment is a combination of

mercurials (or bismuth compounds) and arsenicals. The chief danger from mercury is poisoning, which is first indicated by ulcerations around the gums of the molar teeth. Other early findings are changes in the large bowel, especially near the coecum, and the kidneys, where tubular injury is early noted by albuminuria. Pregnancy adds to the work of the kidney, so close attention to the kidney action is essential. Prophylactic cleansing of the mouth two or three times daily, with careful examination of the mouth and urine at frequent intervals, is the safest preventive. The risk from arsenic is the nitritoid crisis. This may be prevented by careful preparation of the arsenical solution with its immediate use, and is best treated by injections of adrenalin. If the two drugs cannot be used together, arsenic has the more powerful influence on the case, and should be used in preference to mercury alone. Bismuth preparations are considered of value equal to mercury and customarily show less local reaction.

It is difficult to know where to draw the line. Too stringent treatment will permanently injure the patient, while insufficient treatment means a diseased child. Injections started after the sixth month are far less beneficial than those instituted during the first two trimesters, because often premature delivery occurs before the treatment has become effective.

In conclusion, one may say that the diagnosis of syphilis is of extreme importance to pregnant women, and when present treatment must be started early with stringent dosage of arsenic and mercury or bismuth to the limit of tolerance. Furthermore, the lack of evidence of syphilis in the newborn does not indicate that the child is free from the disease.

Diagnosis and Treatment

The Ambulatory Treatment of Varicose Veins

General Considerations and Technique.

The results obtained in the treatment of varicose veins by means of injections show this method to have a permanent place as a therapeutic measure. Many different substances are in current use as intravenous sclerosing agents, but the object of all of these is the production of a phlebitis in the vein wall. This phlebitis is primarily either physical or chemical, depending upon the agent employed. A gradual thrombosis of the vein occurs; this is followed by organisation and eventually fibrosis of the thrombus, leaving a thin fibrous cord in place of a dilated and tortuous vein. The treatment is throughout ambulatory and need in no way interfere with the patient's work or recreations. Considerable discussion has recently centered around questions of technique, notably the nature and amount of the substance injected, the posture of the patient, and the use of a tourniquet. The method is not yet old enough to have become stabilised in detail; but the technique set out below has proved convenient and easily workable. With the exception of patients in whom contra-indications exist, the method is applicable to all cases of varicose veins, even in old patients or in the presence of complications such as dermatitis or ulceration.

The Circulation in Varicose Veins.

A considerable body of evidence both clinical and experimental goes to show that there is marked abnormality of the venous circulation in varicose conditions. On the whole, this evidence suggests that in patients with severe varicosity of the internal saphenous vein and in whom the Trendelenburg sign is positive, the blood flow in this vein is directed away from the heart when the patient is in the upright posture, but if the limb be raised to 45° or higher the flow is either stationary or sluggishly towards the heart.

Experimentally, this has been shown by the use of the haemodynamometer and by radiographic studies. That there is similarly a reversal of the blood flow in the skin capillaries of the

leg under these conditions has been shown by Magnus using the skin microscope. In severe varicose states, therefore, the blood coming from the deeper parts of the limbs passes upwards in the femoral vein, reaches the level of the saphenous opening, and a certain amount of it passes into the internal saphenous vein and travels distally along this. From the lower part of the saphenous vein area the blood returns to the deeper system either by way of anastomotic veins, or after having passed through the capillary bed once more, in a reverse direction. Under these conditions certain areas of skin will be supplied with blood which has already once circulated through the capillary bed. These factors of the venous circulation are of fundamental importance in the development of varicose dermatitis and ulceration, in their chronicity and their resistance to purely local treatment.

This theory of the venous circulation is supported by clinical observation of the conditions under which varicose ulcers may be cured. Healing may be attained by adequate rest, by bandaging the affected limb to secure competent valve action of the veins, by surgical extirpation of the diseased veins, or by their intravenous thrombosis. All of these methods lead to the breaking of the vicious circle which permits of venous stagnation and capillary reversal. The varicose ulcer results primarily from malnutrition of certain areas of skin due to the mechanics of the circulation in varicose conditions, and its prophylactic treatment lies in the cure of uncomplicated varices

The Histology of Thrombosis.

The processes occurring in the vein wall and its lumen following intravenous sclerosing injections have been studied experimentally, both in man and in animals, by removing portions of veins at varying intervals afterwards. These studies all show that in response to the irritation of the injected fluid a chemical phlebitis of the vein wall occurs, leading to the production of a firm, adherent thrombus over the affected segment. There is considerable swelling of the wall of the vein and proliferation of its cell elements, and this is rapidly followed by organisation of the thrombus. The fibrosis, however, may take three months to become completed. The thrombosis of the vein occurs in response to the very active changes occurring in the vein wall, and at no stage whatever is the thrombus soft or loosely attached. For these reasons detachment of a portion of the thrombus with all its attendant risks becomes a very remote possibility.

The Quinine-urethane Method.

Many different solutions can be employed to produce thrombosis in varicose veins. The one about to be described was introduced by Genevrier, and gives very good results.

Quinine Hydrochloride, 4 g.; urethane, 2 g.; aq. dest., ad 30 c.cm.

The solution is made up in small rubber-capped vaccine bottles and is then sterilised by boiling. As some of the quinine salt crystallises out on cooling, the bottles should be allowed to stand in warm water for a few minutes before use to redissolve this.

Technique of Injections.

The technique I employ is as follows:-

With the patient standing an Esmarch's tourniquet is applied, proximal to the proposed site of injection. The only object in applying the tourniquet is to render the veins prominent during the actual insertion of the needle into the lumen of the vein, and in all cases it should be removed before the injection is given. The patient then lies down and the area of proposed injection is thoroughly cleaned with spirit. The needle of a 5 c.cm. syringe containing the quinine-urethane solution is introduced obliquely through adjacent healthy skin into the lumen of the vein it is desired to thrombose. The plunger is slightly withdrawn to confirm the correct position of the needle, and the tourniquet removed. The injection is then slowly given at the rate of 1 c.cm. in 15 seconds. The object of removing the tourniquet before giving the injection is to have the vein in as collapsed a state as possible during the injection, and to ensure the quinine-urethane solution reaching the vessel walls in a high concentration. The needle is withdrawn and firm digital pressure applied with a sterile swab at the site of injection for about two minutes. A small collodion dressing on wool is then applied and when dry the area is firmly bandaged. The maintenance of digital pressure after injection, followed by bandaging, is designed to lessen the risk of leakage of blood mixed with the injection material into the tissues around the site of puncture. Should this occur local complications may follow. The patient is allowed to proceed home and to carry on with his normal activities. Rest is never enjoined but the patient is always warned of the reactions which follow injection. He returns for further treatment at the end of a week.

Dosage.

In using the quinine-urethane method it is always advisable to commence injections with a very small dose. The one usually employed is $\frac{1}{2}$ c.c.m. The object of this is to test, firstly, the local reaction of the veins to the solution; and, secondly, the patient's sensitivity to quinine, though it is exceptional for any general reaction to occur in the doses customarily given. After the first injection larger doses may be used; but never more than a total of 4 c.c.m. at any one sitting. The injection may be given in amounts of 1 c.c.m. or more at various sites, but as a rule not more than 3 c.c.m. should ever be given at one side. In the majority of cases an injection of 1 c.c.m. will be found sufficient to thrombose an area of about 2 inches on either side of it. But it should be borne in mind that no two cases react exactly alike, and decisions as to dosage must be influenced by the degree to which thrombosis is produced.

Site of Injection.

The first injections should always be made in the most distal part of the affected area and each succeeding injection should be made proximal to it. This enables the operator to distinguish easily veins which are still patent from those which are thrombosed. In the majority of cases, therefore, the injections will begin on the inner side of the lower third of the leg. If, however, the varicose condition involves the inner side of the foot and the region of the internal malleolus, these sites should not be injected at the commencement of the treatment; after the course the veins will probably be found to be much smaller in size and as a rule give rise to no further symptoms. Should it be decided to inject these areas, however, it is as well to bear in mind that the pressure of boots and shoes is likely to cause some discomfort whilst thrombosis is proceeding.

The whole of the saphenous tract may be treated to within 4 inches of the saphenous opening.—Reginald T. Payne, M.B., B.S., F.R.C.S. Eng., in *The Lancet*, June 9, 1928.

The Famous Wildungen Spa

There are just a few places in Europe that have a very definite and arresting quality of charm and individuality. Such a resort is Bad Wildungen, one of Germany's beauty spots, hidden away in the principality of Waldeck, a little off the main road, away from the beaten track of the tourist. Yet so near has modern transport come, that Wildungen, reached by the junction of Wabern on the line between Hamburg and Frankfurt, stands but a day's journey from London.

The town itself meets the railway station, but the Spa stands well away from narrow streets and old fashioned houses in a glorious valley amid woods with sentinel hills, pine clad for the most part, that have assumed the rôle of guardians and keep all harsh winds at bay. The life of the Spar centres in that part of the far-flung valley gardens where the George Victor Spring rises, bright and sparkling, under a colonnade. These gardens are remarkable not only for their entrancing situation, but for the care with which they have been planted and the efforts that are made to preserve all forms of wild life.

The health-seeker or holiday maker who drives through quaint, sleepy Wildungen to the woodlands that hide the Spa, is conscious of very little more than an old-fashioned 17th century town and some country nebulously attractive in fading light. He has left all habitation behind when all of a sudden the Spa itself is reached and the lights of the royal Bath hotel shine down upon the road he travels. There are other Spa Hotels, but this one, built in semi-circular fashion with a finely balanced cupola about the middle, ample balconies and charming private gardens, is as distinctive in its fashion as the Spa itself. There is no hotel that is quite like it in all Germany. Across the garden from where the visitor sits in the dining-room that overlooks them, is a band stand, and here a delightful orchestra will beguile his evening hours, helping him to forget the fatigue of the way.

Rising betimes, always advisable, may be regarded as essential at Bad Wildungen, because, though all the hours are good, those of the morning are incomparably the best. The woods are just awake, and the birds with them, and the perfume of the gardens has not yet been weakened by the sun, which is just peeping over the rim of the Eastern hills and shining gloriously through the screen of beeches, oaks and pines. Two or three hundred yards of beautiful walk through gardens or woods, if you prefer to follow the byways that ring the gardens round on either side, and you reach the opening where the George Victor Spring is supplying the water drinkers with their morning draught, while, near at hand, the orchestra is gathering in the band stand by the side of the covered promenade. In the afternoon the orchestra plays again by the side of the Spring or it goes to another one of the famous fountains, this time the Helen-Spring, also set in a valley amid the high hills, and also provided with a restaurant

so that those who wish to hear the music, but are not compelled to take any more water, may set it to afternoon tea or coffee.

Although it may be that more than half the visitors to the Spa are the robust friends of those who are suffering, the latter have the first claim to consideration, and this, of course, is as it should be. Late night entertainment is always given out of hearing to the folk who have to undergo a cure. The result is that all classes are catered to, and while the Spa has its excellent reputation for effective treatment it can also offer a really enjoyable time to those who have perfectly sound health. There are even mild games of chance to be played in the best hotels, but those who wish to gamble must go elsewhere, because all gambling is forbidden in Germany.

Nowadays Wildungen expects to receive more than several thousand visitors and these come to her from all parts of the world, while of her healing waters, to which reference will be made later, millions of bottles are sent out annually, especially to North America, where the waters of the HELENENQUELLE are to be had in almost every drugstore. How did it ever happen that the hidden beauty of the Wildeck Valleys has such a great reputation on both sides of the Atlantic?

True, the reputation of the waters of Wildungen is much older than the Spa itself. The Springs themselves were known for their healing qualities as early as the middle of the 16th century. The little settlement, however, that has risen in such well ordered beauty round the springs is not more than 70 years old.

Both the George Victor and the Helen Springs are used in turn by the resident physicians, and they have found that in many cases the action of the one supplements that of the other. There are many cases of catarrh of the bladder for which the Helen Spring is effective, there are others that require the more potent waters of the George Victor. These last are most effective in the treatment of elderly people.

Surgical treatment is necessary in many of the cases that come to the Spa, where a group of specialists is kept busy throughout the year, and there is hardly a form of disease of the urinary system with which the surgeons are not quite familiar. Treatment is facilitated by the waters of the springs. A special diet kitchen is in every hotel or pension where there are patients who are under the doctor's orders.

It is common knowledge that many people, inclined to suffer from some mild form of the troubles for which Wildungen is indicated, go there voluntarily year after year for the baths, the waters and the diet kitchen, and by so doing their symptoms may never become disabling. However, most patients that come are moderately or severely ill. The Royal Bath Hotel is equipped with every modern device that may be of service to the invalid. In addition to the mechanical appliances which facilitates the use of the waters, it should be noted that the water from the famous Wildungen Springs can claim to be very rich in natural carbonic-acid gas. The normal treatment includes a series of baths and it is possible to have all kinds, from the tubs of volcanic mud—so unpleasant to look at, and yet so soothing to rest in—through all grades of water treatment till you come to the electric cabinet itself. Everything at the Spa is self-contained. One of the most amazing installations there is the system of furnaces with a huge chimney stack from which nothing black and noxious appears to escape. All smoke is consumed in the furnace and this although the material used looks more like rubbish than coal. The Spa makes its own electric light, pumps its own water, and the immense boilers that heat the baths serve the great hotel of which they are a part.

One gets the curious sense at Wildungen of being in a place that exists almost without reference to the world outside. Indeed, the Royal Bath Hotel may be said to approach very nearly to that condition, because it has its own bake house as well as its kitchen, its own laundry and light and heating. Moreover, it is equipped with a first class modern dairy, where special attention is given to every form of "Kur"-Milk. This can be taken fresh in its natural form or it can be prepared in whatever way the physician may prescribe; indeed the milk treatment has its part to play in the scheme of curative things at Wildungen.

The Kur-Administration places itself unreservedly at the services of the visitors and it is largely for this reason that this little Spa in the woods, away from the beaten track and relying for its success upon a reputation won by merit alone, is among the most thriving and progressive in Germany.

Case of Post-Encephalic Palsy

Dr. Herschmann and H. Wolf (*Zeitschrift für Stomatologie*, August, 1928) have cured a peculiar disturbance of speech in post-encephalic palsy by the use of a prosthetic appliance. Observing that the patient's speech was improved when he bit upon a hard substance, such as a pencil or pipe stem, an apparatus was made to raise the bite. The result was highly satisfactory.

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Dr. Kerr's Peace College

We have from time to time reiterated in these columns our conviction that the conservation of human life is a fundamental concern of medicine and medical men. The medical profession is especially interested in matters bearing upon peace and war.

It is therefore a happy circumstance that a colleague should be the creator of an idea bearing upon this particular problem which is marked by constructiveness, practicability and brilliant presentation.

In December, 1928, Dr. LeGrand Kerr, distinguished pediatrician, sent to the Hon. Emanuel Celler, member of the House of Representatives, a brief exposition of the idea in question, study of which impelled the esteemed Congressman to introduce a resolution aiming to put Dr. Kerr's idea into effect. We reproduce herewith, first, Dr. Kerr's statesman-like contribution to the cause of universal peace, and second, the Representative's prompt response in the House, bespeaking for both of them the hearty endorsement and active support of the entire medical profession:

We have for generations rationalized war until the habit of thought of our body politic is that wars are necessary evils which the world must endure. It will take years of real education thoroughly to supplant this "war" idea with the idea and ideal of peace, which is the heart hunger of a vast and ever increasing body of American citizenry. This education must be according to the most approved pedagogical methods, by teachers who are authorities, pursuing a most carefully wrought curriculum. Haphazard enlightenment, no matter how highly idealistic or splendid its motive, retards what it intends to advance.

The Kellogg treaties have fired the imagination of all right minded citizens. The famous pact does not prevent wars, but makes them illegal. It is probably the greatest step in furthering the cause of world peace ever advanced. It fixes the international mind upon the possibilities of peace because of the power and authority of the originator and its signatory acceptance in Paris.

But epoch making as it is, it never will come to full fruition until backed by a strong national public opinion. We must mold a strong public opinion favorable to it. This in turn requires the education of public opinion.

Agreed that education is the most efficacious method, where shall we start? Shall we leave the matter in the hands of well intentioned enthusiasts?

Inimicable to the best results in molding public opinion is the fact that individuals speaking as such are accepted as individuals and their teachings commonly accepted as individual opinion but lacking in authority. Let us honor the good they do and be grateful to those who finance them, but not be blind to their limitations.

If it is worth while to set up institutions and man them with the best available brains for the training of young men in the arts and practice of war (and it is) how much better it is to set up as comprehensive, as well manned and adequately organized institutions, in the arts and practice of peace. If it is worth while to organize our citizenry into a great unit for the prosecution of war to its earliest success, how much more worth while it is to organize and train them for ultimate permanent peace.

Would it not be an epoch-making step if our Government, safeguarding the best interests of all of its people, continued its War College and its Naval Academy with their present high standards, but matched them with a Peace College.

A Peace College attracting young men who would be taught all of the arts of peace including diplomacy; men who could be guaranteed in the cause of peace as high a place as those now trained for war; men who could be given preference in diplomatic appointments; such an institution would be the crown of the American Educational System.

Men trained in the arts of peace would be continuously drafted for the education of the public in various ways. Speaking as they would with authority after such training, through the radio and other channels, they would become a tremendous factor in molding public opinion in favor of universal peace.

This is distinctly the work of the Government, but, if not taken up by the Government, a Peace College could be started by popular support until such time as the Government would take over its activities. A few millions thus spent would mean a saving of billions, if one war was prevented, to say nothing of the preservation of countless thousands of precious lives, homes and property.

H. J. RES. 371 IN THE HOUSE OF REPRESENTATIVES January 5, 1929

Mr. Celler introduced the following joint resolution; which was referred to the Committee on Foreign Affairs and ordered to be printed:

JOINT RESOLUTION Establishing a Peace College.

Whereas only through education will the American public attain the "will to peace;" and

Whereas only through the "will to peace" can wars be prevented; and

Whereas the so-called Kellogg-Briand peace pact makes illegal but does not prevent wars; and

Whereas a college given to the training of our future citizens in the paths of peace will go a great way toward preventing wars: Therefore be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled. That the President in his discretion appoint five persons, one of whom shall be a Member of the Senate, one of whom shall be a Member of the House of Representatives, one of whom shall be the president of a well-recognized university, one of whom shall be an industrialist, and one of whom shall be a member of the armed forces of the United States, to constitute a committee for the purpose of conference and study to the end that its members may discover the best ways and means whereby the United States Government can establish an institution to be hereafter known as the United States Peace College, same to be situated in the city of Washington, District of Columbia.

Sec. 2. There is hereby appropriated \$100,000 to be used by said committee in its study and research for the aforesaid purpose, and said committee shall report to both Houses of Congress its findings and conclusion no later than the 1st of December, 1929.

Foreign Medical Study

We read with interest and amusement a recent article in the Herald Tribune on Vienna as a medical center, to which "hundreds" of American physicians were flocking, as to a veritable Mecca.

Having spent a year in that city in the early 80's we noted with pleasure the fact that this ancient shrine had revived from the blight of the war; but, in reading between the lines, it was evident that there was a considerable degree of camouflage and that conditions had not changed much since the early days.

Patients seem to be treated quite as brutally in clinics as they were fifty years ago, when the indignation of Americans was aroused by the callous attitude of the professors and their assistants toward helpless women. The patient had no rights at all after entering a hospital and no secret was made of the fact that one's diagnosis would always be confirmed at the autopsy, this gruesome promise being made in the presence of the patient.

In the newspaper article referred to one of the principal attractions about Vienna was said to be the fact that it was the center of modern teaching with regard to the mysterious subject of rejuvenation, which savors not a little of quackery. Since Voronoff has stated frankly that all that he has really accomplished has been to prolong the mental activity of elderly subjects, not to revive their waning sexual powers by the grafting of "monkey glands," we may dismiss this claim to motoriety as out of date. We have tried it over here and found it n. g.

Why should Americans go to Germany or Austria for postgraduate study at so much expense, not to say loss of time, when the same advantages are present right here in New York? There is only one answer to this question. We doubt the statement that foreign study is now necessary and certainly do not believe that it adds to one's humanity towards hospital, or private, patients—an important factor in the education of a young physician.

Our advice to the student is to stay at home and to avoid foreign fads and fancies. We can read about them just as well.—H. C. C.

Spur or Curse?

Press reports quote Dr. Hans Zinsser, Professor of Bacteriology at the Harvard Medical School, as declaring that underpaid pioneers in medical science, devoting their lives to research for the benefit of humanity, should marry heiresses. "The men who devote themselves to medical science in the laboratory are notoriously underpaid . . . The only salvation for them is to wed heiresses or have wealthy parents or sponsors. For that reason, I hope our heiresses will pick on medical pioneers instead of foreign nobility . . . As it is to-day, a man of the finest brain and genius, with four years of post-graduate work and two years of hospital work, commands less than a chauffeur or a broker's clerk or a floorwalker."

The doctor ingenuously assumes that the selection of wealthy parents or heiresses carries a guaranty of assiduous industry and ambition on the part of the young scientists. Alas! after the passage of a few years of more or less sincere effort, too many of these economically favored ones are not to be found in the laboratory, but on the links. And we

have long fostered the seditious notion that it is the presence of so many in our professional ranks who are above the operation of economic laws that accounts for many of the difficulties of their poorer brethren. We are emboldened to speak frankly because of Dr. Zinsser's indiscretion [?]. The subject is a delicate one, seldom introduced, and we are risking an accusation of bad taste.

We are not inclined to subscribe to Dr. Zinsser's opinion. We prefer the spirit in which Dr. Roux works. Let Pierre Van Paassen explain in the following passage:

The successor of the famous Pasteur is Dr. Roux, director of the Pasteur Institute in Paris. Dr. Roux's salary is 20,000 francs per year, or in American money, precisely \$800. This great and famous scientist lives in a garret, with an iron bedstead, a table, a chair and a washstand as the only furniture. Of course he is at the laboratory at 7 in the morning and does not quit the place till 8 in the evening. Around him in the research rooms he has gathered a devoted band of young scientists from all lands: Russians, Germans, Belgians, Czechs, a Japanese, an Arab and several Americans. One of these assistants told me the following typical anecdote about the professor the other day. A young German doctor told the "maître" he was leaving. "Why?" asked Dr. Roux. "We are on the eve of making a great discovery." Another three or four years and I think we will be justified in announcing the result of our investigations to the world." The assistant then cautiously intimated that he was going because of financial reasons. "What?" shouted Prof. Roux—"a scientist goes because of money! Monsieur, that is nothing less than treason!" "Can you improve my situation, Maitre," asked the German doctor. "I can give you a rise of 100 francs a year (\$4), no more. I know you are an excellent confrère. I doubt not that some day humanity will be grateful to you. But that's all I can do!" The same day we read that Miss Doris Reid has a salary of \$100,000 or 2,500,000 francs.

Horse Sense in Medicine

"Carried away with every wind of doctrine"—is not the apostle's warning applicable to the curious state of medicine in this age?

Open your last medical journal and it bristles with new theories and methods of treatment. It would seem as if our once conservative profession had adopted the *Zeitgeist*, the insatiable desire of the Athenians to "hear something new." We have been properly the target of witticisms at our expense from Molière to Bernard Shaw, and from Hahnemann to our genial old teacher, Oliver Wendell Holmes (God bless him!).

I am glad that I have lived to see this age of progress, to follow keenly the latest advances made by clinicians and those princes of the profession, the research-workers, whose high goal is not the acquisition of wealth, but the addition to our exact knowledge of pure science. I have always envied them and wished that I had been one of that glorious brotherhood, instead of being a mere money-grubber.

But, what is the reaction of the younger generation, who alone count for the future of medicine? Have they not been fed up with theories at the expense of common sense, which, after all, is an important factor in this practical world?

I have been impressed with the knowledge of human nature displayed by the more mature members of the Roman Catholic priesthood, who use it in the confessional, as well as in their parochial work. Why don't we, as clinicians, imitate them in the office and clinic?

Natura sanat, non curat—that is always my reply to my friends the Christian Scientists, and they don't like it.

The elder Flint, Janeway, Loomis and a host of

our old teachers, whose spirits still brood over us, knew nothing about bacteriology, vitamins, calories, or any of our present aids to diagnosis and treatment, but they did know how to handle patients and how to inspire confidence and hope.

Medication was of the "shotgun" type and we smile at it now in this age of tablets and capsules, but the power of infusing loyalty into their patients (now notoriously disloyal) was wonderful. They ing-room, but they had our confidence because they were often brusque, not to say rough, in the consult-were strictly on the level.

We have indeed removed the ancient landmarks that the fathers set, in fact we have set them far ahead, but often at the expense of sacrificing their high ideals. "If this be treason, make the most of it."—H. C. C.

Youth Will Be Served

We recall the days of yore, when the young doctor was kept under until he was thirty or thirty-five years of age, as a child who should be "seen and not heard."

Any original idea, or suggestion of possible reform, was not received any too kindly by his elders. The writer, being an independent, somewhat rebellious youth, met with rebuffs not infrequently, until time proved that his advanced ideas were justified.

Personal opinions, rather than facts based on careful statistics, marked the transactions of medical societies. Now, all is changed and for the better. The bright young fellows of the present day, thoroughly trained by long experience in hospitals, are recognized as authorities and have a respectful hearing while their elders sit quietly and learn from them. Personally we prefer them as consultants, instead of their older and more "distinguished" confrères, and are not ashamed to recognize them as more up to date. We have been recently looking over the theses of fourth year medical students, who take a special course at Cornell under Professor George Ward in gynecology and obstetrics, and marvel at the industry, research and scientific presentation of facts shown in their monographs, which compare favorably with the theses of foreign candidates, being less verbose and more practical.

While we always shall believe that unbaked specialists should be discouraged until they have had a thorough training in general physical diagnosis and internal medicine, we must admit that those gentlemen who have served as house physicians and surgeons in modern hospitals are better fitted to concentrate on a special line of work than are recent graduates who are crazy to become so-called "specialists" as soon as they leave school.

There were few specialists in gynecology in the early days. Thomas, Polk and other eminent doctors were always general practitioners.

As for obstetrics, or "midwifery" as it properly was called, that was neither an art nor a science. Anybody could be a man-midwife. The divorce of the two allied branches was a startling innovation in hospitals and medical schools, and even in the American Gynecological Society obstetrics rarely was discussed.

As regards pelvic pathology—that was studied seriously only by the patient and thorough German School. The writer was one of the first to emphasize its importance here, as the solid foundation of gynecic and obstetric practice.

"Say not then: What is the cause that the former days were better than these?" They were *not* and every college and medical student knows it.

Theories, evolved in the study, have given place to facts, and the earnest pathologists and devoted research workers, the princes of our profession, are now regarded, not as harmless enthusiasts, but as the bulwarks of modern medicine.—H. C. C.

Miscellany

A Theatre of Horrors

Grand Guignol has not abolished the old custom of having a doctor present in the first row. But his presence is no longer necessary. Parisians and strangers alike have become so accustomed of late years to the details of domestic dramas in real life, to be scared by a weak imitation on the stage. There was one piece shown once, now to be revived, entitled "The Laboratory of Hallucinations," which produced an extraordinary large crop of faintings. When the twelfth woman had been carried out and a call was sent in for the doctor, it was discovered that the physician also had fainted.—*Eve. World*.

Why War?

The peak of the mental cases attributable to the effects of the war will not be reached until 1947, according to Miss Edith Spray, assistant director of the War Service for the American National Red Cross.

Miss Spray points out that the veterans of the world war are continually coming to the Red Cross for assistance and treatment, and although the war has now been over for ten years new cases are being continually taken in. Of the disabled veterans 75 per cent. have neuropsychiatric disabilities. Some have been in and out of the hospitals ever since their discharge, while others have refused to admit themselves ill and have worked up to the breaking point.

Among these are many married men, whom the Red Cross assures that it will take care of their families during their period of disability and later find them suitable employment. No matter how long or how discouraging the job, the Red Cross intends to "see it through."

Hygiene Has Progressed a Bit

"European Life and Manners" is the subject of the thirty-second volume of a universal history just published in England. In it we read that in the Middle Ages the hour for dinner was commonly 10 A. M., while supper was taken at 5 P. M. In the sixteenth century in fashionable circles the tendency was to postpone dinner until 12 noon and supper until 6 P. M. However many courses there were, each person kept the same plate, knife and spoon throughout the meal. Forks had made their appearance, first at Venice in the fourteenth century, but they were not welcomed generally, and fingers continued to be the common means of conveying food to the mouth until the close of the Middle Ages. Napkins were unknown, nor were handkerchiefs carried until the middle of the sixteenth century. Hence diners wiped their fingers on bread, which, having been used, was thrown under the tables to the

dogs. Books of etiquette still warned diners against cleaning their teeth with the table cloth and against spitting across the table.—Pierre Van Passen.

Lay Health Agencies and the Physician

Preparations, financial and otherwise, are now being made for the seventh year of the Milbank Health Demonstration in Cattaraugus County. For the past three years, this Demonstration has been consistently opposed by the physicians of the county, and the attitude of the physicians has been unanimously approved, after detailed investigation, by the Medical Society of the State of New York, and by scores of other official medical bodies.

The Milbank Foundation, which is financing the experiment, has steadily refused to modify its position and has not paid the slightest heed or attention to the advice and admonitions of sound medical opinion. It has given a thorough demonstration of the technique and effects of deliberate Lay Control of medical activities.

The result is summed up in the following statement from the County Medical Society to John A. Kingsbury, Homer Folks, and the other New York officials who are directing the experiment: "Your demonstration has demonstrated conclusively that wherever lay bodies attempt to interfere with and guide official health work, the result is inefficiency and chaos."

During its first four years, the Health Demonstration expanded its initial activities rapidly through every available lay channel. During the fifth year, the physicians rebelled and a bitter fight was waged. During the sixth year, the Demonstration has remained quiescent, taking no very aggressive stand but clinging doggedly to its political hold. The seventh year, now about to begin, will presumably mark its gradual withdrawal and the marshaling of its statistics to show if possible some beneficial results achieved through its colossal failure.

A recent specimen of publicity material from the Demonstration takes credit for a reduction of one-third in the tuberculosis death rate and nearly one-fifth in the infant mortality. Whether these figures are correct is a matter of individual opinion among those who know the manner in which statistics have been marshaled by the local officials of the Demonstration. But it may be noted that a recent review of health conditions in the State of Illinois shows an equal reduction in both these figures for that state, where also the mortality rate of other diseases has decreased without any intervention from the Milbank Foundation. Members of the Cattaraugus County Medical Society and of the Medical Society of the State of New York shake their heads sadly over the statistical claims and interpretations of such propaganda. Even if the statistics were honestly built up, they mean nothing without allowance for changing economic conditions, general trends, and other factors. They mean nothing except in comparison with similar communities, and these comparisons would in many cases seem to prove the Milbank Demonstration a harmful rather than a helpful feature of the health situation.

In any real emergency, such as the recent typhoid epidemic in Cattaraugus County, the Demonstration has shown itself helplessly tied up in its routine. Its popular influence, in fact, was severely shaken by the discovery that the Director of the Milbank demonstration had

been boiling his water for several weeks before he made any effort to warn the public of danger from a water-borne epidemic.

In offering its program for continuation of its health work for the seventh year, the Demonstration announces: "This appropriation is in accordance with the plan for gradual withdrawal of the outside aid which has been given to this county in pioneering public health work, such withdrawal being timed to coincide with the progress locally in developing an organization to carry on the health program."

LAY CONTROL FAILS

If this continuing health organization, which is threatened, should continue the Milbank policy of lay control of medical activities, it will be as big a failure as its parent demonstration. The essential part of public health work is preventive medicine, and this must be under professional medical control or it is hopelessly lost in the fogs of amateur bungling.

The failure of the Milbank Demonstration in Cattaraugus County has been due to its failure to recognize the importance of the local practising physician. A health program which does not look to the medical profession for guidance and leadership is rightly foredoomed to failure. The evolution of a local or county health program should be the evolution of medical forces within the locality or county. Preventive medicine should be guided and controlled by the medical men of the locality or county.

Similar Demonstrations by the Milbank Fund in Syracuse, N. Y., and in New York City have been equally mismanaged, according to the advices which the Cattaraugus County Medical Society has received at regular intervals from medical observers on the spot. The New York Demonstration has hardly made an impression in New York, having been permitted to dissipate its energy harmlessly in the larger medical currents of the metropolis. In Syracuse, the Foundation has announced its intention of pursuing its experiment for another period of five years, in hopes of being able to adapt itself to the determined hostility of the organized medical profession.

CATALOGUE OF ERRORS

Some of the complaints of the Cattaraugus County doctors against the conduct of the Milbank Demonstration were presented to the State Medical Society, as summarized by William H. Ross, M.D. (Brentwood, L. I.):

"The Demonstration was to a considerable extent conducted during its early stages by practitioners unlicensed in the State of New York, thus breaking the laws of the State.

"Nurses of the Demonstration practised medicine in violation of the laws of New York State.

"Employees of the Demonstration made disparaging remarks regarding the medical profession, and regarding the competency of physicians in Cattaraugus County.

"The Demonstration deliberately created and organized public sentiment for its own continuance in office, by making use of every lay organization it could find, including the Jolly Eight Card Club and an unimportant nursing organization in a remote township, in order to persuade the county government to continue the Demonstration. At the same time, it did not use the same diligent methods to ascertain medical professional opinion, nor has any such effort been formally made since early in 1926.

"There have been continued in authority administra-

tive heads who were offensive in words and acts to the only body which could have been of real value to the Demonstration in its allegedly altruistic health campaign.

"In spite of the above situation, the physicians of Cattaraugus County agreed to forget and forgive the past, if the Demonstration would change its tactics. They promised to assume constructive leadership in all public health activities and to recognize their responsibility as the only authoritative source of medical information regarding the preservation of health. They agreed to have confidence in the Demonstration and to co-operate with it. These advances, made at the suggestion of the State Society, were ignored and refused by the Demonstration.

"In agreement with the officers of the State Society, the county physicians offered a sound method of deciding at the end of 1928 regarding the continuance of the Demonstration, agreeing to accept the verdict of the highest officers of the Council of the Medical Society of the State of New York in conference with the officers of the county medical society. This agreement, in part endorsed in conference by Homer Folks and other representatives of the Demonstration, has since been rejected by them.

"Finally, the county society agreed to a statement of Eight Fundamental Principles, which were approved in conference by representatives of the Milbank Foundation, the State Charities Aid Association, the State Medical Society and others. But when these principles were submitted to the local representatives of the Demonstration and the Director of its activities, he declined to endorse them or recommend their adoption by his board. Every agreement made with one branch of this curious organization is subject to refusal by another. Each official has apparently many different individualities and positions, and is ready always to plead his *alter ego*.

"We know full well that lay groups can continue to operate this Demonstration and others like it; if they wish, employing administrative heads who will follow completely the desires of the men who hold the purse strings. But we also know that the medical profession of the state and nation, having placed its hand to the plough, will not turn back. It will organize itself for administration of this kind of work, and in time will strikingly succeed. Every doctor's office should be, and eventually will become, a health center."

PAVING THE WAY

The situation in Cattaraugus County has attracted such widespread attention that the highest officials of the Milbank Foundation were constrained a few months ago to spend several days in Chicago for the purpose of defending their position to the American Medical Association, which heretofore has not entered the controversy, but which must now give it some attention unless the situation is remedied. These high officials devoted a considerable portion of their platform time in Chicago to violent attacks on the medical profession, alike in Cattaraugus County and throughout the country.

Now, because of the widespread knowledge of the Cattaraugus County situation, a complete clarification of the relations between medical bodies and lay organizations will pave the way to a constructive understanding everywhere and will undoubtedly mean much to the cause of public health.

More particularly since the war, there has been an intense desire on the part of various "uplifting" organizations to dominate and regulate everybody's busi-

ness. Such paternalistic tendencies, unless curbed, will break down American institutions. The taking over of the practice of medicine by lay groups is a part of the socialistic, bureaucratic trend advocated by long-eared reformers, and patterned after the mistakes in public health practised in many European countries.

A great part of the money set aside for the operation of these activities is dissipated in aimless and fruitless activities. A part of it goes into the political pork barrel. Another part of it goes to pay a type of doctor who is a failure in private practice and must feed on the public purse. Some of these doctors have not even a license to practice medicine. Cattaraugus County is supplied with a small army of nurses who are unwilling to do the much-needed type of ordinary nursing, but who seek to occupy a place midway between the patient and the doctor—a position which verges closer and closer to the practice of medicine by unlicensed and untrained meddlers.

The "uplifting" organization tends inevitably to pauperize insidiously the populations with which it deals. And any organization which pauperizes a people destroys a part of the self-reliance and self-respect which make that people an asset to their community and their country.

Getting something for nothing is bunk. The individual attention of the family physician is more thorough and satisfactory than that being passed down the line by any Foundation and Demonstration. There is no efficient substitute for the individual attention that only the private physician can supply. The health of the community, too, is safer in the hands of the local physician than in the hands of the casual stranger who comes swinging in on the coattails of some uplifter.

The Uplift in Knoxville

From the Illinois Medical Journal

An outstanding mistake that public health organizations, especially voluntary or private health agencies, have made in the past, and which in large part has led to gross misunderstandings between these agencies and the medical profession, lies in not taking the medical profession, through its constituted society, into their confidence from the inception of public health programs and together working out such programs and plans of procedure as appear to be advisable. An excellent example of this is shown in the difficulties recently experienced in the health organizations of Knoxville.

Prior to the recent adjustment, there existed conditions involving a degree of conflict between the voluntary health agencies, the public health authorities and the medical profession such as are more or less common to many American municipalities.

As in most instances, the Knoxville situation was developed from a total disregard by the voluntary health agencies of the medical profession. Here, as is quite commonly the practice, programs were set up by a lay group according to its own conceptions of service without proper knowledge or regard for the needs of such services and without the guidance or advice of the medical profession through the agency of its local society. The medical profession was consulted only after all other plans had been made ready and when medical skill became essential to further functioning. Then the doctors were asked to contribute their professional services, but the doctors were not accorded the right to determine policies. The service was operated on this basis for some months.

These mistaken policies became a source of conten-

tion and eventually the work was forced to close through withdrawal of all medical forces from the staff. For the adjustment of the matter the American Public Health Association was invited to survey the situation and present a plan for future operation. Outcome of studies made was:

- (a) The transfer of all clinics to the city hospital under the direction of the medical staff;
- (b) The organization of a medical advisory board of five members, two nominated by the medical society, to assist the local health officer in an advisory capacity;
- (c) The erection of a Citizen's Health Council to serve as an agency to harmonize the activities of voluntary and official health activities with those of the medical profession; and
- (d) The housing of all public health agencies, official and voluntary, in a "health center" under the coordinating direction of the city health officer who acts in harmony with the decisions of his advisory boards, medical and lay.

To date, this plan of organization appears to be operating satisfactorily. It affords that contact between the public health group and the medical profession that is indispensable to a proper mutual appreciation of each other's services and to a conduct of activities in such manner as leads to harmonious action and a larger measure of real service to the public.

Dr. L. L. Sheldon of Knoxville tells aptly the story of the fight: "The Knoxville Health Center was strictly a lay organization. It succeeded in getting aid and assistance from the City and State Health Authorities. The organization was idealistic in its proposed intentions. As is the case in most Socialistic movements it was absolutely impracticable. The medical profession of the city was called upon to act as staff. It soon developed that members of the staff were merely puppets at the beck and call of the lay organizations. Staff members were given to understand that their only function was to treat any and all patients coming under their hands and any attempts to correct abuses were promptly checked.

"When any protest came from the profession they were unceremoniously informed that if the members of the Medical Society refused to be bossed and dominated by this lay organization, all-time physicians would be hired in replacement.

"The center was one of the chief beneficiaries of the Community Chest, and was also getting an appropriation from the City and State. The Knox County Medical Society determined to let the public know how the Center was being financed and conducted, and the privileges abused, and how unnecessary was the organization.

"The fact was set forth that the taxpayers were paying, and that contributions to the Community Chest were being used to finance a center for the treatment of those who were not entitled to free treatment not only in Knoxville, but from hundreds of miles of surrounding territory. This known to the public, when it came time to solicit funds for the cause, backers found it impossible to do so.

"Doctors took the matter up in the Medical Society and requested all members of the Society to withdraw from the Staff until such time as the Center could be placed in a position where the medical profession could have absolute control. No threats were made, but the sentiment of the Society was so unanimously expressed against the abuses practiced and the contempt shown its members that every member of the Staff resigned, and the organization was forced to close for lack of a Staff. It did not have the funds to employ all-time men. The

medical profession of Knoxville stood together and effectually put this very obnoxious and incompetent institution out of business.

Similiar evils can be corrected anywhere by letting taxpayers and charity contributors know what is going on. No clinic can be conducted without doctors and if the members of the profession can be brought together in this organized capacity they can absolutely dictate.

"The Knoxville Clinic was closed for several months. Now the management has been taken entirely out of the hands of lay organizations and is absolutely controlled by members of the Knox County Medical Society, to the great benefit both of increased public health and decreased public expense."

Dr. E. R. Zemp adds: "Up to 1926 the situation in Knoxville was unbearable. It was dominated almost entirely by laymen, chiefly of the female persuasion. These leaders became very insolent, even dictating to the various members of the medical staff what physicians could, or could not do. Our Medical Society determined to end this misrule of ignorance and bigotry. We went after them hammer and tongs, forced all the medical staff to resign and left the Center helpless. The condition is still unsatisfactory, but much better than it was."

Money Worse Than Wasted

By H. H. SHOULDERS, M.D.

Secretary of the Tennessee State Medical Association

The medical profession of the State of New York, particularly the profession of Cattaraugus County, has had experiences with the Milbank Health Demonstration which we have deemed of sufficient importance to warrant attention. The New York State Society adopted a *public health platform* which we believe will be of considerable interest.

From the reports received it seems that the Milbank work touched every phase of medicine. There was no limit to their activities, though they were supposed to be along the line of preventive medicine. Not long ago the term preventive medicine had a more restricted meaning than it has today. It was interpreted then to mean the control and prevention of communicable diseases, such, for instance, as yellow fever, measles, small pox, etc. Today the term might be interpreted as comprising all of medicine, in that all practice, even surgical practice, has as its purpose the prevention of human suffering and death. Under the latter interpretation it seems much preventive effort is being put forth.

There frequently is no line of demarcation between the work of the sanitarium and the private practitioner of medicine. In recent years vast sums of money have been appropriated by states, counties, municipalities, the federal government and public-spirited citizens for the promotion of the public health. The motives which actuated these appropriations and donations cannot be criticised. The executives placed in charge of the expenditures of these funds and the workers under these funds are often deserving of criticism. The activities of persons engaged in such work have brought about an animosity between the profession of medicine and some of these public health agencies. Such a condition is not only useless but deplorable. No physician has ever raised his voice against any legitimate effort at disease prevention. Physicians are finding it necessary to protest actively against some of the policies of some of the public health agencies.

It appears certain that much of the \$500,000 spent in Cattaraugus County has been wasted, or maybe worse than wasted, in that no very outstanding good has been

accomplished and a definite conflict has been precipitated. The highest good that can come from this vast expenditure under the circumstances would be that of a definite policy of the proper sort.

Some years ago the phrase "public health is purchasable" was coined. It has become a stock phrase. It is used very extensively. It is used sometimes to convey the idea that the more money that is spent in public health activities the more results will be gotten, but such is not the case. In the case of Cattaraugus County, New York, results commensurate with the expenditures are not apparent. It must be remembered that biologic laws and human equations are encountered which will not yield to padded statistics nor financial appropriations.

The same adaptation of practical means to practical ends will work. The employment of improper means or the improper employment of the proper means will bring disaster. For example, a moderate amount of money properly expended in the rearing and education of a boy will be of great advantage to him. An increase in the amount of money beyond the legitimate requirements of necessity may result in harm rather than benefit. The expenditure of ten thousand dollars per year on the boy might bring disaster when the expenditure of five hundred dollars per year would be very beneficial.

There certainly is a limit to the amount of public health one man or agency can purchase for another man or a group of men.

We are prone to forget that the prevention of an overwhelming majority of diseases today is within the power of the individual and that the power of the state or public health agency to deal with many of the factors which enter into the production of disease is limited. It necessarily follows that improvement in the public health situation will be in proportion to individual effort and ability rather than in proportion to the money expended or the number of workers engaged in public health activities.

If the expenditure of a large sum of money in a given locality has the effect of disrupting and deranging the local community agencies created by that community for care of its sick such harm will far outweigh any good such expenditures can do.

The foregoing statements are not to be interpreted as a criticism of the state departments of health. Voluntary agencies which are responsible to no one in particular are the usual offenders.

Wise Recklessness

A good many centuries ago one of the most farsighted seers of human history said, in effect, that the man who saves his life may lose it, while the man who loses his life may save it.

If Bernard Shaw or G. K. Chesterton had said this, the world might have dismissed it as a clever bit of journalistic word juggling, a sacrifice of sober truth for verbal effect.

But the world is a bit reluctant to accuse the Galilean Prophet of word juggling.

Jesus was not a journalist.

He did not make a living by tickling the ears of subway crowds with trenchant epigrams. He was a master of trenchant epigram. I do not know a better text book for budding journalists than the New Testament. But His epigrams and His paradoxes were born, not of conscious word carpentry but of an insight so deep that its

simple expression was so far from the common notion that it seemed strange and bizarre.

It has taken several centuries to grow up to some of His epigrams.

The epigram I have mentioned—that a man may save his life by losing it—is a perfect example of what I mean.

A score of illustrations outside the field of mystical religion can be mustered to show how the world is demonstrating the practicality of this seemingly absurd assertion.

All that is best in the medical profession, for instance, is bent upon making the world so healthy that it will have less and less need for the doctor.

The scientific pioneers in medicine are year by year plotting the eradication of diseases that were the source of bread and butter for their predecessors.

The old doctor made money attending diphtheria cases.

The new doctor prevents diphtheria by a few injections.

Typhoid and tuberculosis tell the same story—diseases that once meant hundreds of visits for doctors are coming under the control of medical science.

Supervision of the health of school children, the employment of district nurses and social workers—all are part of the picture of a profession losing its life as a vast body of private practitioners but saving its life and its dignity in a great adventure in health building and disease prevention.

And there are still other sayings of the great Galilean that are not as paradoxical as they sound.—GLENN FRANK, in *Evening World*.

Cocktails and Their Effect.

By PROFESSOR W. E. DIXON, M. D., F.R.S.

Reader in Pharmacology and Assessor to the Regius Professor of Physic in the University of Cambridge; Examiner in Pharmacology in the Universities of Cambridge, Oxford, and London; Author of "A Manual of Pharmacology," etc.

The word "cocktail" comes from America, and like many Americanisms its origin is obscure. It is a substitute for the sherry and bitters or gin and bitters which were previously in vogue, and is devised for an appetizer to be taken on an empty stomach before meals. It consists of a solution of volatile oils, more rarely, bitters, in a strong solution of alcohol, such as gin, whisky, or brandy. When such a cocktail is taken on an empty stomach its effect is almost immediately obvious, and the partaker experiences a feeling of warmth and comfort in the stomach. Within a minute or two subjective sensations of the most pronounced kind occur which are far too prominent to be explained by the effect which the relatively small amount of alcohol absorbed at this period might produce. The partaker becomes exhilarated, light-headed, bright and talkative; the expression is happier, the face flushed, and the pupils dilated; a feeling of warmth pervades the skin, and the heart and respiration are both quickened. A few people when under the influence of a cocktail become giddy and ungainly in their movements, which may sometimes even approach ataxia. The appetite is improved, and after eating the effect rapidly disappears. A second and third cocktail do not enhance these effects, or only slightly.

Before turning to their mode of action the composition of these drinks may be examined. The basis of many of them is gin and vermouth (Martini),

sometimes with orange juice added (Bronx). Whisky and vermouth make the Manhattan, and whisky, angostura bitters and orange curacao the so-called whisky cocktail. Some are made with brandy, like "side-car," which contains also cointreau and lemon juice; the "coffee" cocktail also contains brandy with a yolk of an egg, port-wine and nutmeg.

The most important constituent in each case is alcohol, and the oils serve mainly as a mild irritant to the stomach. Nevertheless these oils cannot be neglected altogether, because after absorption they excite the central nervous system, and in sufficient doses produce convulsions. In the case of the oil of absinthe this is well recognized, and absinthe convulsions became at one time so prevalent in France amongst absinthe drinkers that the beverage was prohibited in that country. Vermouth consists of many ingredients, but the most important of these is wormwood or absinthe. Vermouth wine is, of course, not as toxic as absinthe spirit; these two beverages bear much the same relationship to one another as ordinary wine does to spirit. Nutmeg is also a cerebral stimulant, and the oil from one nutmeg is probably sufficient to send a man into epileptiform convulsions. A hundred and fifty years ago it was the habit of certain people to add nutmeg to their tea, and ladies even carried about with them dainty little silver graters for the purpose. Both caffeine and nutmeg excite the cerebral cortex, but whereas caffeine excites the higher centers, nutmeg, like absinthe, excites the motor areas.

The quality of the spirit used in making cocktails is, I believe, of little moment, since the other highly aromatic constituents mask the flavour and aroma of the spirit; and the quality of a spirit is largely determined by the presence of very small amounts of the so-called impurities. Three factors then go to make up the cocktail: (1) alcohol, 15 to 30 per cent; (2) essential oils to act as gastric stimulants; and (3) agreeable flavouring.

It is an interesting study to determine how such a relatively small amount of alcohol as that present in one cocktail can produce so powerful an effect as that obtained under the conditions mentioned. The amount of alcohol contained in a cocktail produces a greater effect on the central nervous system than three or four times its alcohol content administered as beer. That is to say, at a time when the concentration of alcohol in the blood of a beer-drinker is greater than that in the cocktail drinker, the degree of intoxication in the latter is more marked. A study of conditions of this kind, especially the classical observations of Mellanby, suggest that it is during the period of rapid absorption of alcohol that the central nervous system is profoundly affected.

It is well known that during the passage of drugs through living membranes a powerful stimulant action is produced on the more remote tissues. The diffusion of drugs through the pericardium to the heart causes powerful stimulation of certain parts of the heart so long as the tension of the drug on the two sides of the membrane suffers. The diffusion of alcohol and other volatile substances through the bronchial tubes causes the muscles of these tubes to contract, but again only whilst the alcohol tension on the two sides of the mucous membrane is unequal. Volatile drugs, including alcohol, injected directly into the cerebro-spinal fluid, produce a powerful stimulant action on the central nervous system until the vapour tension between the cerebro-spinal fluid and brain cells become

equalized. The action of the cocktail may be explained in the same way. The spirit is very rapidly absorbed from the empty stomach, and the rate of absorption is still further facilitated by the irritant action of the oils. Having reached the blood, it is absorbed into the tissues, and especially the central nervous system; during its passage into the nerve-cells it produces a stimulation, which continues until the tension of alcohol in the nerve-cells and blood becomes equal, after which the alcohol exhibits its ordinary action on the central nervous system. The physical action is strictly limited in time to fifteen or twenty minutes. The cocktail then exerts an immediate action, different from that produced by ordinary alcoholic beverages, by reason of its composition and the conditions under which it is taken.

It is well known that anxiety, pain, worry, emotion, and fatigue inhibit the hunger contractions of the alimentary canal and destroy appetite, and that hunger is induced by contractions of the stomach, oesophagus, and intestines. If a drug can produce an effect on the brain which removes or masks for the time being these conditions, temporary relief is obtained and the appetite returns. There is no reasonable doubt that this effect can be obtained by alcohol, and this forms an intelligible explanation why a weary or sad man after a cocktail can enjoy a meal which previously he may have refused to touch.

This type of person, however, is rarely the type which cultivates this form of drinking. A large percentage of cocktail drinkers are young men and young women, and they drink to lose their shyness, so that they may become bright and interesting, and it may be also partly in a spirit of bravado. These young people are usually not content with one drink; they often indulge in two or more, though the second has a much less pronounced action than the first—at least, so far as the initial effect is concerned.

Most drugs of addiction assuage the pangs of hunger and thirst. This is true of heroine, morphine, cocaine, and even tobacco. The person who habitually takes alcohol in excess has a poor appetite and rarely eats breakfast, though he may be fat and bloated in appearance—The cocktail on the other hand, improves appetite—at least, in certain abnormal conditions; this it does not by increasing hunger contractions but by relieving temporarily the conditions which are producing inhibition of these contractions.

All will agree that cocktails are utterly bad for the young. Their use injures the stomach and lays the foundation for a habit. Youth is the time when the drinking habit is acquired. Youth desires new sensations, strong emotions, and varied interests. Cocktails supply something of these for a very limited period; they do more than this, they cultivate the habit of drinking in a way and to a degree which in my opinion can be induced by no other type of beverage.

—*The British Journal of Inebriety.*

Tweedledum and Tweedledee

Two physicians were in earnest consultation over the case of a woman with lobar pneumonia. Her husband was attending the discussion. In the course of conversation the family physician, whom we shall call Dr. N. N. R., remarked that the invalid had been receiving digitalis in stated doses. Some minutes later the consultant, let us call him Dr. U. S. P., agreed that digitalis was clearly indicated. The anxious husband eagerly alert paled as he remarked, "But, Doctor, she has had no digitalis whatsoever." It took some time to reassure him to the effect that digitoxin and digitalis were synonymous terms.

The embryo physician learns his pharmacology and becomes well acquainted with the terms of the United States Pharmacopeia. When he stands diploma in hand, he has not only achieved a doctorate in medicine but he has also mastered a new language, the language of scientific medical terminology which to the uninitiated is as so much Hebrew. He is happy in his knowledge and proud of his acquaintance with Latin and Greek which has enabled him to readily understand the derivation of his medical terms.

He opens his office. The corner druggist provides him with "Come to me" prescription blanks. Like as not his first visitors are a long line of detail men representing the various pharmaceutical concerns, each of whom recites his piece with apparent sophistication and with every semblance of scientific accuracy.

Suddenly, like Alice, the young physician finds himself in wonderland. He has placed his sample bottles on a shelf in the cabinet or the laboratory (what physician has not an untidy shelf groaning under a conglomeration of sample medicines?), and in his leisure he decides to study over the day's catch. To his utter amazement he discovers that his linguistic training avails him nothing. Here are words that he has never dreamed of and whose etymologic origin he finds it impossible to trace.

Let's see, what came in today? Thiogen. Oh, yes, something that generates sulphur. Let's read further. A concentrated solution of the sulphates and subsulphates of sodium potassium magnesium and calcium. Ah, this has the ring of familiarity. Sodium sulphate and magnesium sulphate. The old lady has put on her Easter bonnet. What next? Elixir of pyraminal. Literal translation indicates something about fire and amines. No, this is too deep. Let's look farther. Oh, yes, here it is. It contains pyramidon and luminal. The terminologic mutations have been carried one step farther and the mating of pyramidon and luminal has given birth to a new species, pyraminal. But we have been prescribing pyramidon and luminal mixed by the druggist and dispensed in capsules for some time. Excellent idea to dispense them already mixed. It will save the druggist so much time, the new short name will save the doctor some ink and some brain work and the patient will know that he is receiving the newest and latest of the synthetic preparations. Manufacturer, druggist, doctor, patient, rich man, poor man, beggar man, all will be the happier.

Metatone. That sounds good. An alterative tonic. Let's see what it contains. Vitamin B extract. Here's news. We hadn't realized that they had perfected an extract of vitamins as yet. We live and learn. Nucleic acid. Yes, of course, a derivative from the nuclei of cells which of course must have great tonic value. Oh, yes, and here are a lot of salts, glycerophosphates. Of course that would be tonic and reconstructive. Haven't we a blotter on our desk which assures us that glycerin tonic is excellent? We wonder just what is the difference between glycerophosphate compound and Metatone?

Here's something interesting. Ceanothin. It is indicated as a blood coagulant. Curious our professor of pharmacology was so far behind the times as to have failed to tell us of the great therapeutic value of Ceanothin.

Cheracol. Of course, an alcoholic extract or solution of cherry. The formula is printed on the bottle and it looks good as a cough mixture. There appear to be at least eight ingredients. It would take some time to write up such a prescription using U. S. P. terminology. We can remember the word Cheracol much easier. Yes, let's prescribe Cheracol when the opportunity arises.

Bromionyl with Barbital. Nothing confusing about that. And the ingredients are on the label. Here is a

good sensible prescription. Barbital with triple bromide made up into an effervescent granular powder. This should be easy to take. Let's prescribe it. Unfortunately, for this preparation, however, the name is not as euphonious as Cheracol and some days later we have forgotten just how the first word should be spelled. So this does not get prescribed.

What's next? Diasystol. To be sure, this must have something to do with blood pressure but our professor of pharmacology told us positively that no drug had any permanent effect in lowering blood pressure. So, out of courtesy to his memory let's pass this up.

And so the list might go on. The scientific erudition of the detail man is sometimes so great that we wonder why he wastes his time in such an unproductive field. Occasionally in our moments of doubt we wonder how much he is laughing up his sleeve as the saying goes at the avidity with which we appear to drink in his confidential tips for getting better results.

Yes, we are in wonderland. How many preparations of digitalis are there, each with a different name? Exactly what is the pharmacologic difference between digitalis leaves, digifolin, digitalone, digalen, diglusin and the others? For the life of us we do not know and therefore decide to prescribe that preparation whose name we recall most easily or that preparation which is most attractively packaged or that which for one reason or another seems to be a little easier of administration.

We made so bold within the last month as to write a prescription for 0.1 gram digitalis folia pills. The patient living in a nearby city of ninety thousand inhabitants wrote back with much concern that he had been unable to find a druggist who could fill the prescription. No longer does the mortar and pestle hang above the druggist's entry as a sign of his profession. Too infrequently now does he even use it in the little back cupboard devoted to compounding prescriptions.

Within the week we wrote a prescription for tribasic citrocarbonate. A certain manufacturing chemist supplies an excellent effervescent tribasic citrocarbonate, so, to save the druggist trouble, we specified the name of the manufacturer on the prescription. But the word tribasic does not appear upon the ready bottled prescription package and the druggist, a conscientious man, therefore said that he could not fill the prescription. This caution is of course laudable but it is scarcely to his credit that he does not know the exact nature of the ingredients of the ready prepared packages which he is dispensing.

Under how many trade names can you procure a mixture of pyramidon and some phenobarbital preparation? Wherein lies the superiority of one over the other? Tweedledum and tweedledee, you shut your eyes and take your pick.

Of course, there is something to be said on the other side. If milady prefers to pay a dollar for ten cents worth of rouge put up in a pretty container which will look well on her dressing table, why should her esthetic sense not be also consulted in the matter of tastily prepared medicaments? The manufacturing chemist has accomplished much in the line of making drugs less disagreeable to take and we owe him a debtor's gratitude. Many of them have also invested great sums in constructive experimental research, much of which is not directly remunerative but some of which ultimately turns out to be of distinct value to the ultimate consumer. This must be paid for out of the income from sales of drugs.

We are living in a day of exaggeration in which unusual claims are made for the most commonplace things and in which old friends are scarcely recognized on ac-

count of their gaudy apparel and new names. This applies even more to other commodities, soaps, cleaning powders, underclothing, silk stockings, lead pencils, radios, and so on. As long as we are living in a day of exaggerated advertising and copyright names and enjoying it, there is little probability of an early change in the matter of drugs.

We make no plea for a revolution in drug sales methods. We only urge that when a physician prescribes minced pie for his patient, whether it be made according to the recipe of Grandma Jones or Old Lady Brown, he should know what are the exact ingredients of said minced pie and how he will expect his patient to react thereto.—W. T. V., Editorial, *The Jour. of Lab. & Clin. Med.*, Oct., 1928.

A Bureau of Medical Information.

At 2 East 103d Street two medical institutions have united to establish an office for the dissemination of authentic information on medical matters. They are the New York Academy of Medicine and the Medical Society of the County of New York.

Fundamentally the object is to put the public in closer touch with the modern miracles worked by science in the prevention and cure of illness. It is a long step away from the old habits of secrecy surrounding the practice of healing. Medicine men, witch doctors and all the ancient magicians who made the sick well cast such a spell of darkness over the art that it has retained to this day a tinge of sorcery. To dispel the vestiges of secrecy and to develop a direct, intimate channel of communication between the honest physician and the public is the purpose of the new office.

In one particular the public will be served indirectly, but most usefully. Newspapers receiving information of new medical discoveries are urged to consult the bureau in order to avoid the publication of premature or fraudulent announcements. Despite modern enlightenment, many people are deceived by charlatans. These will be more rapidly tripped up in their quackery by free appeal to the bureau. It may be reached by mail or by telephone, Atwater 4700.—*New York Times*.

Jurist Says Sin of the Criminal is Society's—Favors Enlightened Treatment of Insanity

Addressing the eighty-second anniversary meeting of the New York Academy of Medicine, at Fifth Avenue and 103d Street, Chief Judge Benjamin Cardozo of the Court of Appeals suggested that committees be named by the Academy and the Bar Association, so that the resources of the two professions could be pooled in a study looking toward a restatement of the homicide law and perhaps of the definition of insanity as an excuse for crime.

He predicted in the not far distant future a transformation of the system of punishment for crime to be brought about by the teachings of bio-chemists, behaviorists, psychiatrists and penologists. He said also that the retention of the death penalty might seem to the next generation "an anachronism too discordant to be suffered, mocking with grim reproach all our clamorous professions of the sanctity of life."

The present punitive system, he declared, was often stern when it should be mild and mild when it should be stern and was a survival of the time when punishment for crime was thought of as a substitute for private vengeance with its sequel of

private war. The reality of the thirst for vengeance, he added, was however, very real, if hideous, and could not be ignored as yet for fear of the resurgence of the dual or the feud.

"If the ignominy attached to certain crimes through the sanctions of the criminal law were withdrawn," Judge Cardozo continued, "the horror of them might be dimmed in the minds of many who have no thought of crime. Yet, even so, the present system, in the view of many, is as irrational in its mercies as in its rigors. The casual offender expiates his offense in the company of defectives and recidivists and after devastating years is given back an outcast to the society that made him. The defective or recidivist goes back to renew his life of crime, unable to escape it without escaping from himself.

"Adjustment of some sort there must be if we are to fulfill our duty to defective fellow-beings. Run your eyes over the history of a man sent to the chair. There is a story of Rake's Progress more implacable than any ever painted by Hogarth. The correction school, the reformatory, Sing Sing and at last the chair. The hand of doom was on his head from the beginning. The sin, in truth, is ours, the sin of a penal system that leaves the victim to his fate when the course he is going is written plainly in the files of the courts and the stigma of mind and body.

"Your hands (referring to the members of the Academy and the medical profession as a whole) must hold the torch that will explore the dark mystery of crime, the mystery, even darker, of the criminal himself in all the deep recesses of thought and will and body. Here is a common ground, a borderland between your labors and our own, where hope and faith and love can do their deathless work.

"I think the men of your Academy might well emphasize the need for a restatement of our law of homicide, and in particular of the distinction between murder in its two degrees. I think they might well emphasize the definition of insanity when viewed as an excuse for crime. The present distinction (between the two degrees of murder) is so obscure that no jury hearing it for the first time can fairly be expected to assimilate and understand it. I am not at all sure that I understand it myself. Upon the basis of this fine distinction with its obscure and mystifying psychology, scores of men have gone to their death.

"I think it is time for you who speak with authority as to the life of the mind to say whether the distinction has such substance and soundness that it should be permitted to survive. Some appropriate committee there should be in the Bar Association, on the one hand, and in this Academy, on the other, whereby the resources of the two professions can be pooled in matters such as these, where society has so much to gain from co-operative endeavor.—*New York Times*.

Laugh This Off

"In 1926 there were 150 deaths from alcoholism in all Australia, with a population of about 7,000,000, against 682 in New York City alone, with a population of 6,000,000. In all England and Wales, with a population of 38,000,000, there were 203 alcohol deaths in 1926, yet New York City, with only one-sixth of that population, had more than three times that number and the Metropolitan Life Insurance Company reports that

the liquor death rate has increased sixfold in the dry law decade.

The champions of the Volstead Law promised that it would empty the jails, yet the Federal Council of Churches of Christ reports that the arrests in Chicago for misdemeanor in 1920 were 15,273, while in 1924 they were 239,829. In Pittsburgh the arrests for drunkenness in 1920 were 14,000, while in 1927, under dry legislation, they increased to 30,000."—Samuel Harden Church, President Carnegie Institute, Pittsburgh.

Flying Ambulances to Aid Physicians

The flying ambulance is the latest contribution to the field of commercial air transportation. John W. Henney, president of the Henney Motor Company of Freeport, Ill., announced recently that his company and the Great Lakes Aircraft Corporation of Cleveland had designed an airplane ambulance and that production of the craft would be started in the near future. The decision to manufacture this type of plane was made following inquiries for some mode of fast transportation of emergency cases to medical centers like the Mayo brothers' clinic and from small towns to larger cities.

The airplane ambulance cabin will be 6 feet wide, 10 feet long and 5 feet high, with accommodations for a nurse, a physician, a wheeled cot and two pilots or one pilot and an extra passenger. Hot and cold running water, an electric fan and ample drawer space for medical supplies, instruments and linen will be included in the equipment.

The machine will be an adaptation of the navy's Martin bombers. Equipped with a Pratt & Whitney Hornet motor of 525 horsepower and special gasoline tanks, the flying ambulance will have a speed of 125 miles an hour and a cruising radius of approximately 1,000 miles, Mr. Henney stated.—*N. Y. Times*.

A Warning to Strong Swimmers

Dr. W. A. Young, director of the Medical Research Institute of the Gold Coast, was a particularly expert swimmer, and before his death from yellow fever last May he wrote an article suggesting a possible cause of fatalities in surf-bathing. In not a few autopsies on native bathers found washed up on the beach Dr. Young noted that the lungs were aerated and there was no water in the stomach, but this organ occasionally showed some distension. He was in the habit of returning the cause of death as heart failure from prolonged exertion, but a paper on hypochlorhydria and air-swallowing^a suggested to him that the air-swallowing which took place while swimming might cause sufficient distension of the stomach to lead to functional angina pectoris. In order to swim out to sea against large breakers it is necessary to dive deeply, and even on the surface breathing is a matter of picking the right moment and dodging the foam and chop. It is therefore necessary to hold the breath for long periods and to breathe in quick gulps as opportunity offers. While these gulps may themselves cause a certain amount of air-swallowing, Dr. Young thought it more probable that air entered the stomach while the swimmer was under water. After the breath has been held against exertion for a certain length of time, he said, the respiratory centre refuses to be controlled; the expiratory muscles contract slightly, the cheeks puff out a bit, and air is swallowed. On reaching the surface, even though a deep breath be taken at once, he had noticed that there was sometimes a slight feeling of nausea and a curious sensation of lack of confidence. Eructation gave immediate but not complete relief; it had to be repeated several times to restore well-being, and there might be actual vomiting. Both from his own experience and from post-mortem findings Dr. Young believed it likely that this pneumatic distension of the stomach could cause reflex cardiac failure. As he remarked, this bears out the traditional advice "not to bathe on a full stomach"; it is not so much the food that matters as the room it takes up, so that a very little air can cause a lot of distension. If eructation is impossible—and it is a feat of which not everyone is capable—the remedy suggested was to let the air slowly trickle out of the mouth under water when the respiratory strain became too great. This should relieve the intra-buccal pressure and avert the necessity for swallowing.—*The Lancet*.

The Physician's Library

A History of Pathology. By Esmond R. Long, Ph.D., M.D., Professor of Pathology, University of Chicago. Cloth. Price \$5. Pp. 291, with illustrations. Baltimore: Williams and Wilkins Company, 1928.

This is a most readable history of medicine—it is virtually that, despite its title and its aim, since in telling the story of pathology one must, perchance, tell that of the sciences upon which it is based. And so the author begins with antiquity and goes on to Galen and the Middle Ages like any good historian, until the tale culminates in the blaze of glory lit by Rokitansky, Virchow and Pasteur. The author thus proves that pathology is medicine, or, if one likes, that medicine is pathology. It is the tissues always that concern us. The historic prospective is kept very true, as when the author shows that elaborate autopsies, in which the findings were correlated with the clinical histories, were done by Wepfer and his colleagues nearly a century before the appearance of Morgagni's *Seats and Causes of Disease*, so often credited with the beginnings of pathologic anatomy in the strictly modern sense. There are many excellent illustrations.

Constitutional Inadequacies: An Introduction to the Study of Abnormal Constitutions. By Nicola Pende, M.D., Professor of Clinical Medicine, Royal University of Genoa, Italy; translated by Sante Naccarati, M.D., Sc.D., Ph.D., Associate Professor of Nervous and Mental Diseases, Post-Graduate Medical School of New York, New York City; with a Foreword by George Draper, M.D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, Columbia University, New York City. 270 pp., including an authors' and a general index. Lea and Febiger, Philadelphia; 1928; \$3.50.

In this work we find a most absorbing presentation of the subject of human biotopology, of which the principal sponsor in this country has been Dr. George Draper, Chief of the Constitution Clinic of the Presbyterian Hospital, New York City, who writes the foreword. Heredity, the endocrines, and exogenous factors of all sorts must be taken into account in a proper evaluation of the individual presenting morbid variations due to his special personality. We are going back to the individual phenomena that engrossed Hippocrates. Every time medicine, down the ages, has reverted to the Greek School of Clinical Thought and Approach, great results have accrued. It would now appear to be a good way of life in medicine, once again, for him who would find understanding despite the welter of vain things. The degree to which Pende has progressed, as revealed in this book, in elucidating abnormal constitutions, is amazing—and highly enlightening.

International Clinics. Volume IV. 38th Series, 1928. Edited by Henry W. Cattell, A.M., M.D. J. B. Lippincott Co., Phila. Pp. 312.

Some of the lectures on diseases of old age, which were delivered at the New York Academy of Medicine last October, are included in this volume. Dr. Harlow Brooks' lecture on certain phases of angina pectoris is a masterpiece. Dr. Pfahler ably takes up the results of radiotherapy in malignant disease. Dr. Barker deals with the dangers of circulatory insufficiency in obesity, especially when associated with emphysema and bronchitis. Dr. Anders discusses immunization. Dr. Brock writes on the problem of epilepsy. Dr. Howard Fox takes up the differential diagnosis of some syphilitic and non-syphilitic eruptions. There are many other articles, all up to the usual high standard of this publication.—M. W. T.

An Index of Differential Diagnosis of Main Symptoms. By various writers. Edited by Herbert French, M.D., Physician to H. M. Household; Physician and Lecturer, Guy's Hospital. Fourth Edition. Wm. Wood and Co., New York. Pp. 1171, 1928.

An encyclopedia of medicine, covering main symptoms in alphabetical order, beautifully illustrated with half tones and colored plates. This edition has been revised throughout. There are 701 illustrations of which 179 are colored. The editor has done well to keep so much material in a single volume. New tests are included and the general aim is for practical diagnosis. While the alphabetical arrangement of the book is an index in itself, there is a general index at the end of the volume, amounting to 226 pages. It is so arranged typographically that the main articles are readily referred to as contrasted to mere notes on the disease. It would be impossible to go into detail about this massive volume, but it is safe to say that almost every symptom is covered. I should dislike to practice medicine without this book.—M. W. T.

Pharmacotherapeutics. *Materia Medica and Drug Action.* By Solomon Solis-Cohen, M.D., and Thomas Stotesbury Githens, M.D., 2007 pages, Appleton and Company, New York, London, 1928. Price, \$15.00.

The authors have deemed it wise to preface the detailed study of individual drugs and classes of drugs by the discussion of certain general principles, chiefly biologic, which may serve to guide the use of drugs not only, but of all classes of remedial agents. In this discussion are included certain aspects of the newer developments in physics and chemistry; and stress is laid not only upon the adjustive and adaptive powers constituting the self-defense of the organism, but also upon monodynamic conception of disease-recovery; that is to say, the view that disease and recovery are not separate states or opposing forces, but one continuous, albeit complex, process, in which derangement and restoration are from the first associated.

Necessarily, these subjects could not be treated exhaustively or prophetically. What has been said, however, may serve to direct the attention of the reader, to the necessary coordination of physiology and pathology with therapeutics and to the intimate relation borne by physicochemistry to all of these.

Among the subjects dealt with are the object and scope of pharmacotherapeutics, drug influence, sources, preparation and therapeutic use of drugs, classification of remedial agents, anti-pathogens, tissue alterants and function modifiers.

An altogether notable event in medicine is the publication of this great work after more than a quarter of a century of labor by the authors. It can be described as the most exhaustive and at the same time the most practical presentation of pharmacology, *materia medica* and therapeutics to be found in the English language in a single volume. Certain works stand out as major texts in their subjects and take a foremost rank in the eyes of the profession. We feel that this great work by Drs. Solis-Cohen and Githens is of this nature.

A Textbook of Medicine. By various authors and edited by J. J. Conybeare, M.C., M.D. Wm. Wood and Co., N. Y. Pp. 976, 1929, Price, \$8.00.

An interesting and up-to-date textbook of medicine by British authors. Dr. Conybeare has succeeded in giving the essentials in medicine in as small a compass as possible, yet avoiding the nature of a synopsis. A short description of the more common and important diseases of the skin has been included. There is also a section dealing with the diseases of infancy. There is an appendix on life insurance examination. This book will be widely read and is particularly valuable to the busy practitioner. The reviewer wishes to compliment Wm. Wood and Company on their desire to give so much valuable material at a comparative low cost. This is accomplished by using a narrow spacing on each page, permitting as it does of much added material. In this way a large volume is made at a low cost.—M. W. T.

Partnerships, Combinations and Antagonisms in Disease. By Edward C. B. Ibetson, M.D., Fellow Royal Soc. of Med., London. F. A. Davis Co., Philadelphia. 1929, Pp. 348.

A book full of thought and extremely interesting to read. It takes up the newer conceptions in physics, biochemistry and bacteriology as related to disease. The antagonisms of bacteria are illustrated by that of the malarial parasite to the spirochete of syphilis. Partnerships are illustrated by bacteria which cooperate, e. g., diphtheria and streptococcus; a diathesis assisting the growth of a germ, such as diabetes followed by pneumonia or tuberculosis. Tables are given showing relationships in disease. Syphilis and tuberculosis are considered in relation to other diseases. Interrelations of the endocrine diseases and interrelations of some forms of arthritis are dealt with. The relation of varicella to herpes zoster is interesting. This book is highly recommended.—M. W. T.

The Practical Medicine Series. The year's progress in medicine and surgery, in eight volumes. Series 1928. The Year Book Publishers, Chicago.

A. General Surgery. Edited by Evarts A. Graham, M.D. Pp. 800. Abstracts of articles published during 1928 in the medical journals throughout the world. The reader will find all of the recent advances in surgery including the control of paralytic ileus by splanchnic anesthesia. The new treatment of varicose veins by injection methods is considered. There is an interesting discussion of pulmonary suppuration. MacIver's work on the origin of acute dilatation of the stomach is of great interest.

B. General Medicine. Edited by Drs. George H. Weaver, Lawrason Brown, George R. Minot, William B. Castle, William D. Stroud, and Ralph C. Brown.

A splendid review of medicine by able clinicians. One of the features of all of these volumes is that the editor gives his personal views of the subject after nearly every article. The reader can, by reading these editorial notes, obtain in a moment the

latest developments in the diagnosis and treatment of disease.

C. The Eye, Ear, Nose and Throat. Edited by Drs. Charles P. Small, Albert H. Andrews and George E. Shambaugh. Pp. 540.

The general practitioner as well as the specialist will welcome this volume as it covers recent progress in this field. The general practitioner now realizes that he must be well informed in this work in order to advise his patients as to the best method of procedure.

These volumes, under the general editorial direction of Dr. Charles L. Mix, embody a great deal in a concise manner. It does not seem possible that such valuable books could sell for prices ranging from \$2.50 to \$3.50.—M. W. T.

A Doctor's Letters. To Expectant Mothers. By Frank Howard Richardson, M.D., F.A.C.P. Pp. 118. The Children-Parents' Magazine and W. W. Norton & Co., New York. 1919. Price, \$1.75.

Dr. Richardson always has something worth while to say and writes in a manner easily understood by those for whom this volume is intended. It is a common-sense book for the expectant mother and will give her the best advice. It gives the mother to be the latest scientific views from a well-known specialist.—M. W. T.

Correspondence

"Do You Know Your Onions" and Mercurochrome?

To the Editor of THE MEDICAL TIMES, N. Y. City.

Apropos of your squib on p. 94, March number, referring to Mercurochrome—10 Soluble, I enclose herewith a hand bill from a grocery house drummer.

I am told the grocery trade stock this article and the demand for same is growing. In this little community it has displaced Tinct. Iodine "because it doesn't burn" and diminishes the need for Antitetanic Serum.

Why do you wish the "mystic number 220" changed to "10"? Respectfully,

THEO. ENGELBACH.

March 14, 1929.

NOTE:—The mystic number 10 is a reference to the fact that Mercurochrome is being distributed in Five and Ten cent stores. We trust that our caption will not add to our esteemed correspondent's bewilderment.—Editor.

A New Minimum in Deaths from Tuberculosis

The most important item in this year's health record is the continued drop in the tuberculosis death rate among the white industrial population whose mortality rate from tuberculosis disease during the January-September period dropped to the astoundingly low figure of 72.1 per 100,000. This represents a decline of 6.8 per cent in a single year, of 13.7 per cent in two years, and of 42.3 per cent since 1920. It is now entirely safe to announce that the end of 1928 will see the lowest mortality figure ever recorded for tuberculosis in the United States and Canada. The season of the year when the maximum mortality from this disease invariably takes place has passed, and it is highly improbable that any condition will arise during the final quarter to bring the death rate for the entire year up to the former minimum. There has been little improvement in the tuberculosis death rate, among colored persons, during the three latest years, but comparison with earlier ones shows that negroes, also, are showing marked progress in reducing their mortality from tuberculous disease.—Metropolitan Life Insurance Co.

Dental Clinics of Greater New York

In one district alone of Greater New York there are said to be 20,000 school children whose teeth have been examined but who are waiting for the needed dental care. The dental services available at moderate cost for children and adults in that city have been found to be inadequate, although the city boasts 516 dental chairs in actual use in 152 public and private clinics. One reason for this inadequacy is that the equipment has been used less than half the time because of lack of available funds to pay dentists. The New York Tuberculosis and Health Association is now recommending the full use of existing facilities, more clinics for the districts outside Manhattan where most of the present clinics are concentrated, and coördinated development of adequate dental-clinic facilities especially for children two to sixteen years of age.—U. S. Department of Labor.